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JOURNAL

OF THE

STRAITS BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

JUNE, 1881.

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PUBLISHED HALF-YEARLY.

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[No. 8.]

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OF THE
STRAITS BRANCH
OF THE
ROYAL ASIATIC SOCIETY.

DECEMBER, 1881.

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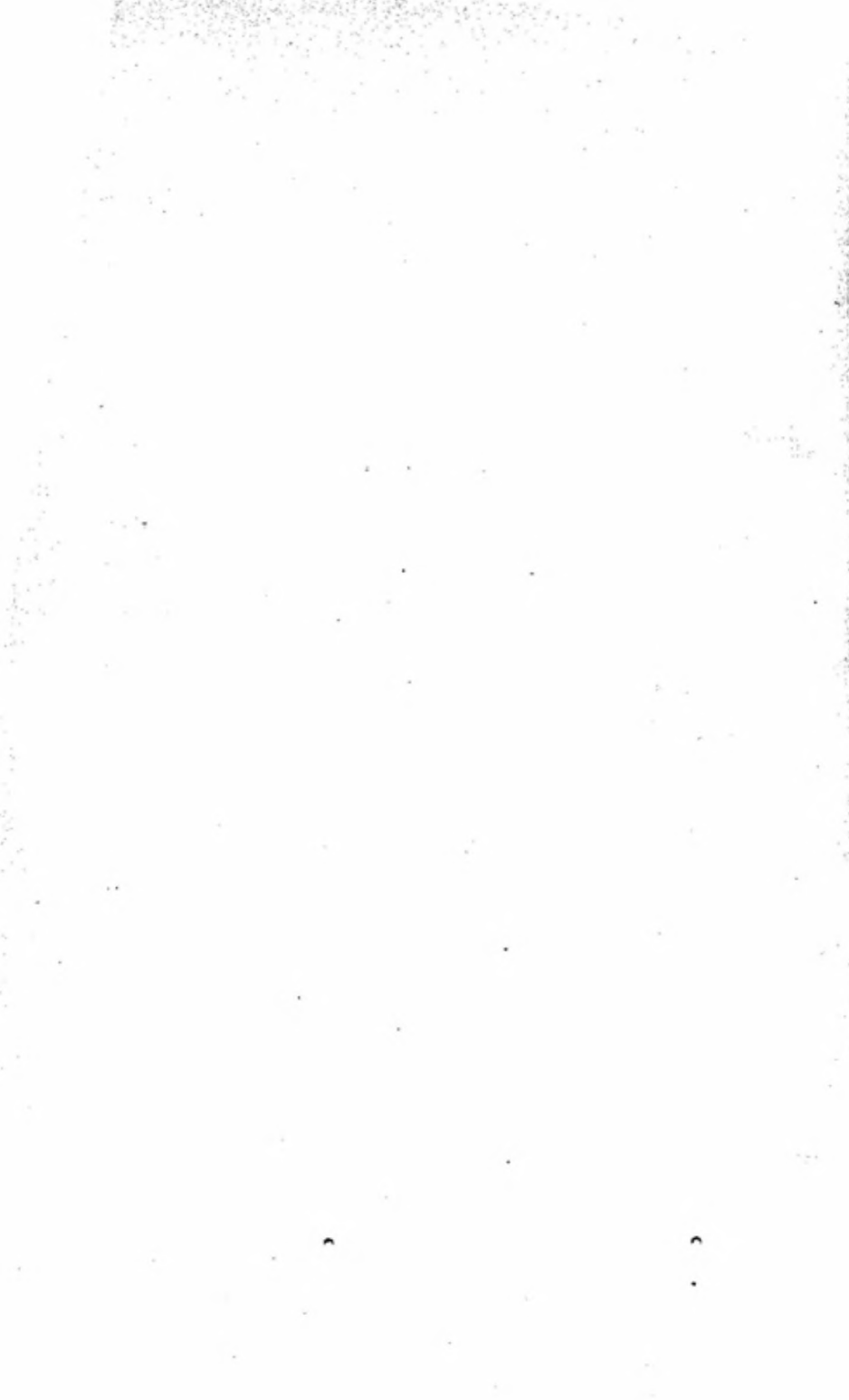


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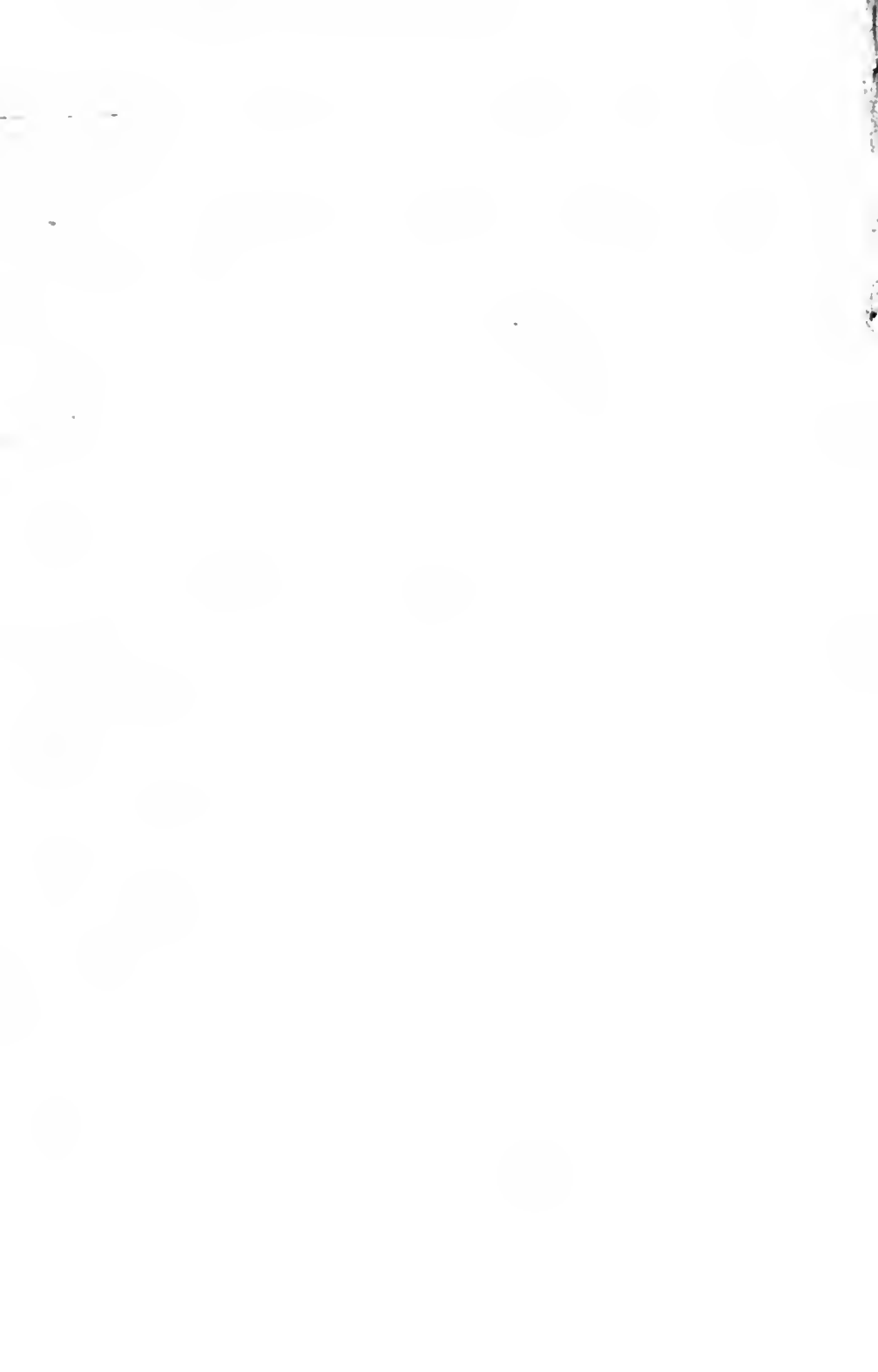
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THE
STRAITS BRANCH
OF THE
ROYAL ASIATIC SOCIETY.

PATRON:

HIS EXCELLENCY SIR FREDERICK ALOYSIUS WELD, K.C.M.G.

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Râja, Mus. D.
SCHOMBURGK, Mr. C.
SERGEL, Mr. V.
SHELFORD, The Hon'ble THOMAS

SKINNER, The Hon'ble A. M.
SOHST, Mr. T.
STIVEN, Mr. R. G.
SYED ABDULLAH BIN OMAR AL
JUNIED, Mr.
SYED MOHAMED BIN AL SA-
GOFF, Mr.
SYERS, Mr. H. C.
SYMES, Mr. R. L.

TALBOT, Mr. A. P.
TAN KIM CHENG, Mr.
TAYLOR, Mr. J. E.
THOMSON, Mr. J. T.
TOLSON, Mr. G. P.
TRACHSLER, Mr. H.
TREACHER, The Hon'ble W. H.
TREBING, Dr. C.
TRÜBNER & Co., Messrs.

VAUGHAN, Mr. H. C.
VERMONT, Mr. J. M. B.

WALKER, Lieut. R. S. F.
WHEATLEY, Mr. J. J. L.
WYNEKEN, Mr. R.

ZEMKE, Mr. P.

There are also 16 subscribers in London who obtain the Journal through Messrs. TRÜBNER & Co., but their names are not known in Singapore.

PROCEEDINGS
OF THE
GENERAL MEETINGS
OF THE
STRAITS BRANCH
OF THE
ROYAL ASIATIC SOCIETY.

ORDINARY MEETINGS
HELD AT THE
RAFFLES LIBRARY.

MONDAY, 8TH MARCH, 1880.

PRESENT:

The Ven'ble Archdeacon G. F. HOSE, M.A., *President*.
P. A. SWETTENHAM, Esquire, *Honorary Secretary*.
G. A. REMÉ, Esquire.

and

Several Members and Visitors.

The Minutes of the last Meeting are read and confirmed.

Mr. A. HART EVERETT and Dr. SOURINDRO MOHUN TAGORE are, on the recommendation of the Council, duly elected Members of the Society.

A paper on the Bornean Guliga, by Mr. A. HART EVERETT, is read by the Honorary Secretary.

Mr. G. P. TOLSON reads a paper on Achin.

The Honorary Secretary gives a description of Malayan and other weapons.

The Meeting closes with an expression of thanks to Mr. G. P. TOLSON and Mr. P. A. SWETTENHAM.

TUESDAY, 14TH SEPTEMBER, 1880.

PRESENT:

His Excellency Sir FREDERICK A. WELD, K.C.M.G., *Patron*.

The Ven'ble Archdeacon G. F. HOSE, M.A., *President*.

F. A. SWETTENHAM, Esquire, *Honorary Secretary*.

E. KOEK, Esquire, *Honorary Treasurer*.

E. BIEBER, Esquire, LL.D.

N. B. DENNYS, Esquire, PH. D.

and

Several Members and Visitors.

The Minutes of the last Meeting are read and confirmed.

The President reads a Paper on the Ruins of Bôrô Budur, in the Island of Java, a large number of Plates of these ruins having recently been presented to the Society by the Government of the Hague.

The Honorary Secretary reads a Paper, by Mr. A. HART EVERETT, on the Caves of Borneo.

Dr. DENNYS asks the Assistance of Members in forming a Catalogue of Works dealing with Malayan History, Geography and Literature.

His Excellency the Governor proposes a vote of thanks to the President for his interesting Paper, which is warmly carried.

The following gentlemen, recommended by the Council, are elected Members of the Society:—

Major-General Sir HARRY ST. GEORGE ORD, K.C.M.G., C.B.

General H. MAN.

Mr. G. LAVINO.

Mr. H. FRANK.

Mr. H. L. NORONHA.

The Meeting separates.

ANNUAL GENERAL MEETING

HELD

(by the courtesy of the Committee of the Chamber of Commerce)

AT THE

SINGAPORE EXCHANGE

ON

FRIDAY, THE 4TH FEBRUARY, 1881.

PRESENT:

The Ven'ble Archdeacon G. F. HOSE, M.A., *President.*

F. A. SWETTENHAM, Esquire, *Honorary Secretary.*

EDWIN KOEK, Esquire, *Honorary Treasurer.*

E. BIEBER, Esquire, LL.D.

W. KROHN, Esquire.

A. DUFF, Esquire.

T. CARGILL, Esquire.

and

Numerous Members and Visitors.

The Minutes of the last Meeting are read and confirmed.

The President explains the object of the present Meeting.

The following gentlemen, recommended by the Council, are elected Members:—

General ORFEUR CAVENAGH.

The Rev. J. ABERIGH MACKAY.

Mr. V. SERGEL.

Mr. BENNETT PELL.

A proposal of the Council to alter Rule 7 of the Rules of the Society is considered, and, on the suggestion of Mr. J. FRASER, the following Rule is unanimously adopted to take the place of Rule 7, viz.:—

"Candidates for admission as Members shall be proposed by one and seconded by another Member of the Society, and, if agreed to by a majority of the Council, shall be deemed to be duly elected."

The Annual Report of the Council is read by the Honorary Secretary. (See p. xii.)

The Honorary Treasurer reads his Annual Report. (See p. xv.)

The election by ballot of Officers for the year 1881 is proceeded with, with the following result:—

The Hon'ble CECIL CLEMENTI SMITH, C.M.G., *President*.

E. BIEBER, Esquire, LL.D., *Vice-President, Singapore*.

G. W. LAVINO, Esquire, *Vice-President, Penang*.

F. A. SWETTENHAM, Esquire, *Honorary Secretary*.

EDWIN KOEK, Esquire, *Honorary Treasurer*.

N. B. DENNYS, Esquire, PH. D.,

W. KROHN, Esquire,

C. STRINGER, Esquire,

W. A. PICKERING, Esquire.

BENNETT PELL, Esquire,

} *Councillors.*

The Ven'ble Archdeacon HOSE makes a few remarks expressive of his regret on ceasing to be an Officer of the Society, owing to his early departure from Singapore, but assures the Members of his great and continued interest in the welfare of the Society.

On the motion of Dr. E. BIEBER, a cordial vote of thanks to the Ven'ble Archdeacon HOSE for his services as President of the Society is unanimously agreed to.

Archdeacon HOSE expresses his acknowledgments, and the proceedings terminate.

ANNUAL REPORT
OF THE
COUNCIL
OF THE
STRAITS BRANCH
OF THE
ROYAL ASIATIC SOCIETY,
FOR THE YEAR 1880.

THE Council of the Straits Branch of the Royal Asiatic Society, in making its Annual Report for the year 1880, is glad to be able to inform members that the affairs of the Society are in a satisfactory state.

Some few members have resigned their membership, but their places have been filled by new names, several of these being former residents in the Straits Settlements, who, though now permanently settled in England, take a sufficient interest in the work of this Society to seek to become members of it. The Roll of Members stands now as follows :—

The Patron, His Excellency Sir FREDERICK A. WELD, K.C.M.G.	
Honorary Members,.....	5
Ordinary do.,	125

As will be seen from the Treasurer's Report, the financial state of the Society is good, due in the main to the permission granted by the Government of the Colony that the Journals of the Society may be printed at the Government Printing Press, out of the regular hours of work.

The Council of the Society desires to offer its sincere thanks to the Government for this privilege, and also in no less degree to Mr. NORONHA, the Superintendent of the Government Printing Department, and a Member of the Society, who has given his valuable assistance in printing the Journals without any remuneration whatever.

The Meetings of the Council during the year 1880 were frequent, but the general meetings, as was anticipated, were held at irregular, and, latterly, at distant intervals. The explanation of this lies in the fact that, whereas a large number of MSS. were offered to the Council in the first year of the Society's existence, the contributions have latterly become much less numerous. The Council trusts, however, that the sixth number of the Journal, a proof of the greater portion of which will be open for inspection to-night, and which will be shortly issued, will prove of equal interest with its predecessors; and it is also hoped that this year, the contributions will be sufficiently numerous to enable the members to meet with more regularity.

The fourth number of the Journal (nominally for January 1880), did not appear till May, but the fifth number—the first printed at the Government Press—was issued at the end of July, and the sixth will only now be delayed to give time for the printing of some photographs to illustrate the President's paper on the Ruins of the Temple of Bôrô Budur.

It is very encouraging to be able to report the increased recognition of the existence of the Society. The Straits Asiatic Society now exchanges its publications with learned Societies, it may almost be said, in all parts of the civilised world, and besides the fact that the work here is thus given the widest circulation, the very interesting Journals and proceedings of those Societies in correspondence with it will, in time, form a valuable Library.

The Council regrets to have to report that as yet there is no available information to give regarding the new map of the Malay Peninsula, which is being published under the auspices of this Society. The original tracing has been in the hands of the Litho-

grapher since 1879; several members of the Society in England have, it is understood, been interesting themselves in the matter, but the Council is unable to give any explanation of the great delay which has occurred.

The urgent need of this map is admitted by all; several new geographical and topographical discoveries have been made, even during the past year, and, with the basis of this new map to work upon, it may be hoped, with the assistance of members and all who are interested in such a matter, to produce, in a few years' time, an accurate and useful map of the Malay Peninsula.

Singapore, 31st January, 1881.

THE TREASURER'S REPORT.

By the statement of the Cash Accounts for the past year, which I now lay before the Society, it will be seen that the Receipts amounted to \$1,412.96, and the payments to \$1,207 07, shewing a balance of \$205.89 in the hands of the Treasurer.

The Subscriptions for 1879 to be received amount to \$60, and those for 1880 amount to \$120. There were bills for 1880 outstanding at the end of the year, amounting to \$10.62, which have since been paid. The sum of \$36 has been received to account of the subscriptions for 1879 and 1880, leaving a sum of \$231.27 in the hands of the Treasurer, which, with the outstanding subscriptions for 1879 and 1880 shew a balance to the credit of the Society of \$375.27.

The number of Members of the Society on the 30th January, 1880, was 137, that is to say, 4 Honorary and 133 Ordinary Members. Since then, 15 new Members have been elected; 12 have resigned; 23 Members have failed to pay their subscriptions. Of this number, 13 are considered as having resigned their membership in accordance with Rule 6; but, the operation of this Rule is suspended in the case of the remaining 10 Members, who are likely to pay their subscriptions. I regret to have to record the loss by death of the Hon'ble Hoo AN KAY WHAMPOA, C.M.G., and Mr. L. H. Woods.

The list for 1881 contains 130 Members, classified as follows, viz., 5 Honorary and 125 Ordinary Members.

EDWIN KOEK,
Honorary Treasurer.

4th February, 1881.

STRAITS BRANCH OF THE ROYAL ASIATIC SOCIETY.

Treasurer's Cash Account for the year 1880.

1880.		\$	c.	1880.		\$	c.
	Balance of last account brought forward, ...		603 77		Publication of Journal No. 3, ...		300 00-
	Subscriptions for 1879, ...		86 69		Publication of Journals Nos. 4 and 5, including cost of paper for Nos. 6 and 7, ...		426 72
	Do. 1880, ...		636 00		Lithographing "Hikayat Abdullah," ...		302 00
	Sale of Journal, ...		60 50		Advertisements, ...		5 96
	Sale of "Hikayat Abdullah," ..		26 00		Salary of Clerk, ...		120 00
					Postage, &c., ...		23 72
					Stationery, ...		3 96
					Miscellaneous, ...		24 71
					Balance,...		1,207 07
							205 89
							1,412 96
	Outstanding Subscriptions:—	\$	1,412 96				
	For 1879, ...		60 00				
	" 1880, ...		120 00				
		\$	180 00				

SINGAPORE,
4th February, 1881.

EDWIN KOEK,
Honorary Treasurer.

SOME ACCOUNT
OF
THE MINING DISTRICTS
OF
LOWER PÊRAK.

BY

J. ERRINGTON DE LA CROIX,
Ingénieur de Mines,
Chargé par le Gouvernement Français d'une Mission
Scientifique en Malaisie.

THE region of Lower Pêrak comprises numerous mining districts, which can be placed under the three following headings :—

Sungei Kinta District.

Sungei Bâtang Pâdang District.

Sungei Bidor District.

The former is by far the most extensive, and includes no less than six mining centres which, according to Malay custom, take their names from the various main streams which drain them. They are the districts of Ulu Kinta, Sungei Trap, Sungei Raya, Sungei Tejah, Sungei Kampar, and Sungei Chendariang.

Geological description.

Before giving the particular mining features of these various tin-fields, it is well to indicate first the geological outline of the country.

The geological conditions of this part of the State are more varied than in the northern districts, and offer a greater diversity of sedimentary formation. (*See Section.*)

Granitic formation.

The granite constitutes the foundation of the main ranges and of the hills round which are distributed the different tin-fields.

It is met with in the Senggan range at Gânong Klêdong, Changkat Lahat, the Gôpeng hills, Bâjang Mulacca, and forms the basis of the Changkat Chumor and Janka, near Tapa.

Like in other parts of the country, the rock is highly porphyroid, composed of vitreous quartz, feldspar, mica and tourmaline, in which are imbedded large crystals of feldspar.

The decomposition of the granite by atmospheric agencies has gradually denuded the large crystals, which are harder than the feldspathic element in the paste, and left them projecting from the surface, giving the rock a peculiar appearance.

The amount of mica and tourmaline varies slightly in the different localities, but without altering perceptibly the general aspect.

Sedimentary formation.

The sedimentary formation is represented by limestone, white ferruginous clay, and talc-schist.

Limestone.

The limestone is very abundant in the whole of the Kinta region, and probably forms the basis of the alluvial deposit. It is found at the foot of Changkat Lahat, between the latter and Sungei Kinta. It has been greatly altered at the contact with the neighbouring eruptive rock, and has taken a saccharoid aspect, being white and very crystalline.

It is found again between Pëngkalen Pegu and Pëngkalen Baru, where little peaks crop out of the alluvial soil, broken up and highly decomposed at the surface, but offering no longer the deep alterations noticed near the Senggan range.

At Klian Gânong (Kampar) the limestone is again visible, being white crystalline and containing, in numerous fissures, the tin-ore that has drifted from the granitic formation in the vicinity.

South of Gôpeng, between Kampar river and Bâjang Malacca, several high hills—Gânong Ramian, Gajah and Kandong—are entirely of limestone, and resemble, on a larger scale, the well known Gânong Pondok near Gapis and Gânong Kurau.

In other spots, such as Kampong Barn on Sungei Kampar, the limestone does not seem to have been much altered by the contact of the Bâjang Malacca group, and has kept the usual aspect of mountainous limestone.

In the Bâtang Pâdang district, South of Tapu, the red-*clay*, mentary formation is represented by white clay imbedding nodules of red ferruginous matter.

In a few places of the same district tale-schist can be seen *Tale-Schist*, cropping out from under the clay and resting on decomposed granite.

In this particular mining district the tin-ore is found at the very top of the hills, which leads one to infer that the upheaval which has produced them must belong to a second series of plutonic action posterior to that which has formed the principal ranges of the country.

Ulu Kinta district, which includes most of the region above Pëngkalen Pegu (see Map), is the most extensive of all, but MINING
DISTRICTS.
Ulu Kinta. at the same time, owing to the greater distance from the sea, is the least worked by miners, who naturally prefer turning first to account the mineral wealth of the lower country.

It is a "reserve" for the future, and will, no doubt, be found just as rich as any other part of the State.

At present the principal works are carried on on the Sungei Pari and Sungei Chémer, at the foot of the Senggan range. The tin-ore produced is of a very good quality, and contains a large proportion of white oxide.

The Sungei Kinta itself contains considerable quantities of

tin, and near Ipoh the natives find it profitable to wash the sand in the bed of the river. According to reports, a man, if he can stand to work in the water for several hours, can collect in a day as much as fifteen katties of ore, worth two dollars.

Sungai Trap district.

This district is situated on the right bank of the river Kinta and is well populated by miners, both Chinamen and Malays.

Sungai Papan.

The Papan valley lies between several high hills and is divided into numerous small "gullies," where rich pockets of tin are found.

The valley is about one mile in width by one and-a-half in length, but, up to now, the outskirts only have been turned to account, owing to the great flow of water which often floods the lower part of the valley.

Thirteen mines are at present in full swing, and occupy five hundred men, Chinese and Malays.

Klian Johan, worked by Chinamen, is the most important of all and is probably the deepest mine in the whole State, attaining a depth of fifty feet.

The ore is disseminated, from the surface downwards, throughout the ground, which is geologically formed of white friable clay. The wash is clean and becomes richer in depth. The pumping of the water is managed by the means of a Chinese water-wheel, and the washing of the ore takes place in a long canal acting as a sluice-box.

On each side of that mine, Malays are also carrying on works to the same depth, but unable themselves to put up a proper draining apparatus, they have made with their more industrious neighbours a contract by which they are allowed to let their water flow into the Chinese mine on condition of paying one-tenth of their whole produce.

The ore is smelted in the village, and, being of a very good quality, no blast is required, and the consumption of fuel amounts to only one pikul of charcoal to one pikul of ore.

Eleven furnaces are at work and return, on an average, forty pikuls in twenty-four hours.

The richest deposit lies, no doubt, in the centre of the valley,

but can hardly be worked until a proper and systematic drainage has been organised.

A road, four miles long, is being made and will join Papan to Batu Gajah on the Kinta river.

Several other mines of less importance are worked in the *Sungei Trap* district, especially on the Sungei Trap, where the ore is found in large stones of nearly pure oxide imbedded in a hard blue clay.

The Sungei Raya district is the smallest of all, but at the same time makes the largest returns of tin, owing to the adventurous and enterprising spirit of Pēngnū To' DOMBA, who attracts numerous Chinamen by advancing them the necessary sums to start mines in his district. The total Chinese population amounts to 6 or 700, but many other smaller works are carried on by Malays.

The principal works are situated in the Gōpeng valley. The *Sungei Tejak* geological formation is granitic. At the head of the valley the *district, Gōpeng.* wash lies under a greyish, yellowish clay at a depth of 8 to 9 feet from surface: it varies in thickness from 3 to $4\frac{1}{2}$ feet, but does not present throughout a regular percentage of tin-ore, it being generally found in large pockets disseminated in the wash. These pockets are very rich and exceed in quantity and quality anything existing in the best mines of Larat. Unfortunately the extent of mining ground is very limited in the upper part of the valley, and has been very nearly worked out. Four Kongsis, numbering 150 men, are still at work, but will have exhausted their mines within the next two years.

The new mines lately opened in the lower part of the valley towards the plain are getting on fairly: the wash is thicker, but not so rich and deeper below surface. However, little has been done yet to give the plain a fair trial, and there is no reason why it should not improve.

Fifteen to sixteen Kongsis, with a total number of 7 to 800 coolies, are occupied at present in the Gōpeng district, and returning steadily large quantities of tin. The produce for the week (30th January to 6th February) amounted to 120 pikuls.

The metal is sent on elephants to Pěngkalen Baru on Smugei Raya, where it is shipped for Durian Sa'bāfang, but a better mode of transport will shortly be available when the Government has completed the fine cart-road which is now being made from Gōpeng to Kota Baru on the Kinta river.

Several other surface works have been started among the small hills lying between Gōpeng and Pěngkalen Baru; they are of but small importance, but they return very pure ore, which smelts easily and gives as much as 70 katties of metal to one pikul of ore, the percentage being consequently 70 per cent.

It will be noticed that, as a rule, the surface mines known by the name of "Lampung Works" produce much cleaner ore than deep works, owing probably to the fact that the surface soil is lighter than the deeper wash, formed of feldspar and quartz, and is consequently easier to separate by washing: another reason is also that in the "Lampung Works" the miners do not generally smelt their own ore, but sell it, and have often to carry it to a considerable distance, whence the utility of taking greater pains in the dressing.

*Sungei Kam-
per district.*

This district is one of the largest, but has been little visited up to now. Chinamen, however, have just begun starting works on their own account, principally at Klian Gānong, where the tin is found deposited in the fissures and crevices of the limestone.

A certain amount of tin is also found in the bed of the main stream and the natives in several places work it profitably.

*Klian Sun-
dong.*

At Kaupong Sūdong, on the western slope of Bājang Malacca, a Malay mine is being worked on an entirely native principle.

The ore is disseminated throughout the ground, which is slightly argillaceous, but friable and easy to wash.

Small canals have been brought from the river and run at the foot of the different cuttings. The ground is cut down and thrown in those canals and dressed like in a sluice-box, the height of the face is from 10 to 15 feet; when the ground has been stripped to the level of the water, it is divided into

small rectangular lots, 30 feet long by 15 wide, round which the canals are made to circulate, these lots are ultimately worked out, but not to a greater depth than 5 feet below the water mark.

These mines are worked by the owners, or by strangers who obtain from them a permit to dig, provided they remit one-third, one-sixth, or one-half of the product, according to the richness of the soil.

Quite lately a Chinaman has come from Gâpang and started a new mine, where thirty men are employed.

There is no doubt that the whole region lying West of Bâ-jang Malacca will prove to be one of the richest fields in the whole State.

This district is small, but produces first quality ore.

*Cendariang
district.*

The most important works are in the vicinity of Kampong Naga Barn.

The formation is entirely granitic, and large quantities of ore are found on the surface of the soil, requiring but the trouble to pick it.

The sand of the river is also very rich, and many inhabitants of the village are employed in washing it, getting an average of 70 cents a day.

Some few Malays are also employed in collecting tin-ore in the different small "gullies" formed by the last ramifications of the range.

The only large mine at work in the district belongs to a Malay, who has let it to a Kongsî of fifty Chinamen for one-tenth of the total produce.

The wash lies at a depth of thirty feet, and though being only two to three feet thick, furnishes better results than in any other part of the State. The ground is more loose and easier to dig than in other districts.

A small amount of gold is occasionally found mixed with the tin, but not in payable quantities, the proportion, however, increases in the direction of Bâtang Pâdang.

Judging by the very large blocks of solid oxide which are

frequently found in the wash, as well as on surface, there is no doubt that the lodes which have produced this wonderful deposit must be uncommonly thick, and extend over a considerable length of ground: the tin-field probably extends all round Bâjang Malacca, between the latter and the more eastern range of mountains, and there is no reason why it should not prove just as rich as in the immediate vicinity of Naga Baru.

All indications lead one to believe that before long this Chendarang district will become the most important centre of production of the whole State.

Every effort ought to be made to open that part of the country. The Chendarang river will never allow a large traffic, whereas the Bâtang Pâdang river might be cleared without much cost, and made navigable to a steam-launch drawing 2 feet of water, for at least two-thirds of the way to Thappa. A cart road that would hardly exceed ten miles could then join Chendarang to the accessible part of Sungei Bâtang Pâdang.

The mining fields of this district are situated South of Thappa at a distance of two to three miles from the river. They are three in number. Changkat Chumor, Changkat Janka, and Klian Baru.

The geological features of this field have already been mentioned. The formation is a white ferruginous clay exceedingly thick, resting on talc-schist and granite. The whole ground, up to the summit of the hill, which is about 150 feet high, is impregnated with tin-ore in sufficient proportion to make it payable, and the whole of the stratum is being worked at present. Rain water is made the most of for dressing purposes, and is collected in small reservoirs and ditches running in all directions on the surface of the hill. The tin stuff is thrown in, the tin remains at the bottom, whilst the refuse is carried away by the current. When rain water is scarce, the soil is simply taken to the foot of the hill and washed in a long canal which has been diverted from the river.

The Chinamen work here on their own account by small gangs of eight to ten men, and the total population amounts

Batang Pâdang district.

Changkat Chumor.

to about 300 miners. No gold is found at Changkat Chumor.

This hill is situated a little further to the South-east of the preceding one.

The works are only carried on in the valley where two Kongsis, numbering one hundred men, are working two mines provided with water-wheels. *Changkat Janka.*

In one of the mines the wash is found at a depth of ten feet below the surface, and is from five to six feet thick. It is friable and clean and gives good results. Small quantities of gold are found with the tin—from 40 to 55 grains to one pikul of ore.

In the other mine, sixty coolies are engaged. The wash is six feet deep and measures three feet in thickness, resting on a false bottom of clay four feet thick; below this is a second layer of wash four feet in thickness, the total depth of the mine being seventeen feet.

The first layer contains a little tin, but no gold, whereas the bottom wash is rich in tin-ore and contains 60 grains of the precious metal to one pikul of tin sand.

Two furnaces smelt the product and no blast is required.

At Klian Baru four or five small Kongsis are at work and employ one hundred men. *Klian Baru.* The most conspicuous feature of this small district is the greater proportion of gold found in the wash, averaging 260 grains to one pikul of ore.

Most of the tin-fields in the vicinity of Tapa have been worked since a long period of time, and may be considered at present as pretty well exhausted. New researches must now be directed towards the upper part of the river, at the foot of the Bâtang Pâdang range, where new deposits will probably be found.

The general deductions to be drawn from this rapid sketch of the mining conditions in this wonderful little country are sufficiently evident.

In all the districts, mining is still in a state of infancy, a few small centres have been exhausted, but they form but a very trifling portion of the country. New fields are constantly being discovered and there remains to establish between them *General Remarks.*

and the main rivers proper means of communication.

A good deal has already been done, and well done, to that effect, and it throws great credit on the Government of the State. The Kinta River is cleared, or very nearly so, as far as Kota Bharu. In a very short time it will be accessible to a steam-launch as far as Batu Gajah. The good effect of such work has already manifested itself not only through a greater influx of mining population, but also in a commercial point of view.

Excellent roads will soon join the two important districts of Gopeng and Papan to Sungei Kinta which is the great artery of the country, and give them a new impulse.

A deal of good might also be done if the Government took in hand the draining of certain districts, which, until then, can only be superficially worked.

The great fault with Chinamen, and especially Malays, does not lie so much in their defective method of working as in their inability to organise a proper draining system that will carry away the *surface* water.

The disastrous consequence is that most of the mines are only half worked out, but sufficiently however to render it impossible and unprofitable to others to resume the works at a future period. Considerable quantities of ore are consequently abandoned and lost for ever.

The Government would amply recover such expenditure, for the working out of the country is a work of time and not of a few years as will be shown by the following figures. The total area of the eight mining districts in Lower Perak can be estimated at 1,200 square miles, or 768,000 acres, and it can safely be stated that *one acre in one hundred* is actual alluvial mining ground, offering thus a total "surface utile" of 7,680 acres, which, under very ordinary circumstances, will afford profitable work to 25,000 miners for the next hundred years.

28th February, 1881.

THE
FOLKLORE OF THE MALAYS.

BY
W. E. MAXWELL.

"There is nothing that clings longer to a race than the religious faith in which it has been nurtured. Indeed, it is impossible for any mind that is not thoroughly scientific to cast off entirely the religious forms of thought in which it has grown to maturity. Hence, in every people that has received the impression of foreign beliefs, we find that the latter do not expel and supersede the older religion, but are engrafted on it, blend with it, or overlies it. Observances are more easily abandoned than ideas, and even when all the external forms of the alien faith have been put on, and few vestiges of the indigenous one remain, the latter still retains its vitality in the mind, and powerfully colours or corrupts the former. The actual religion of a people is thus of great ethnographic interest, and demands a minute and searching observation. No other facts relating to rude tribes are more difficult of ascertainment or more often elude enquiry."* The general principle stated by LOGAN in the passage just quoted receives remarkable illustration from a close investigation of the folklore and superstitious beliefs of the Malays. Two successive religious changes have taken place among them, and when we have succeeded in identifying the vestiges of Brahmanism which underlie the external forms of the faith of Muhammad, long established in all Malay kingdoms, we are only half-way through our task. There yet remain the powerful influences of the still earlier indigenous faith to be noted and accounted for. Just as the Buddhists of Ceylon turn, in times of sickness and danger, not to the consola-

* LOGAN—*Journal of the Indian Archipelago*, IV., 573.

tions offered by the creed of Buddha, but to the propitiation of the demons feared and revered by their early progenitors, and just as the Burmese and Talaings, though Buddhists, retain in full force the whole of the *Nat* superstition, so among the Malays, in spite of centuries which have passed since the establishment of an alien worship, the Muhammadan peasant may be found invoking the protection of Hindu gods against the spirits of evil with which his primitive faith has peopled all natural objects.

An exposition of the chief characteristics of demon-worship, as it still lingers among the Malays, is a work requiring some research and labour. Its very existence is scarcely known, and there are not probably many Englishmen who have witnessed the frantic dances of the *Paicang*, or listened to the chant and drum of the *Bidu* beside the bed of some sick or dying person. In the present paper, a corner is lifted of the veil of Muhammadanism, behind the dull uniformity of which, few, even among those who know Malays well, have cared to look, and an attempt is made to select from the folklore of the peasantry a few popular customs and superstitions, some of which had their origin in the beliefs of the pre-Muhammadan period.

The Malay language itself, abounding as it does in words derived from or imported direct from Sanskrit, offers copious materials for illustrating the progress of Hindu influences in this part of the world. To the evidence thus furnished, the corroborative testimony afforded by the sayings and legends of the people is an important addition.

BIRDS.

Ideas of various characters are associated by Malays with birds of different kinds, and many of their favourite similes are furnished by the feathered world. The peacock strutting in the jungle, the argus-pheasant calling on the mountain peak, the hoot of the owl, and the cry of the night-jar, have all suggested comparisons of various kinds, which are embodied in the proverbs of the people.* The Malay is a keen observer of nature, and his illustrations, drawn from such sources, are generally just and often poetical.

* Malay Proverbs—Journal of the Royal Asiatic Society (Straits Branch), Nos. 4, 72, 73, 93.

The supernatural bird *Gerda* (Garuda, the eagle of Vishnu), who figures frequently in Malay romances, is dimly known to the Malay peasant. If, during the day, the sun is suddenly overcast by clouds and shadow succeeds to brilliancy, the Përak Malay will say "*Gerda* is spreading out his wings to dry." * Tales are told, too, of other fabulous birds—the *jintayu*, which is never seen, though its note is heard, and which announces the approach of rain; † and the *chandrawasi* which has no feet. The *chandrawasi* lives in the air, and is constantly on the wing, never descending to earth or alighting on a tree. Its young even are produced without the necessity of touching the earth. The egg is allowed to drop, and as it nears the earth it bursts and the young bird appears fully developed. The note of the *chandrawasi* may often be heard at night, but never by day, and it is lucky, say the Malays, to halt at a spot where it is heard calling.

There is an allusion to this mythical bird in a common *pantun*—a kind of erotic stanza very popular among the Malays:—

Chandrawasi burung sakti
Sangat berkrong didalam awan.
Gonda gulana didalam hati,
Sahari tidak memandang tuan.‡

Nocturnal birds are generally considered ill-omened all over the world, and popular superstition among the Malays fosters a prejudice against one species of owl. If it happens to alight and hoot near a house, the inmates say significantly that there will soon be "tearing of cloth" (*koyah kapau*) for a shroud. This does not apply to the small owl called *punggok*, which, as the moon rises, may often be heard to emit a soft, plaintive note. The note of the *punggok* is admired by the Malays, who suppose it to be sighing for the moon, and find in it an apt simile for a desponding lover.

* *Gerda meninjar kepah-nia.*

† *Laksana jintayu me-nanti-kan hujan*—As the *jintayu* awaits the rain—is a proverbial simile for a state of anxiety and despondency.

Jintayu=jintayu (Sanskrit), a fabulous vulture.

‡ The *chandrawasi*, bird of power,
 Is closely hidden amid the clouds.
 Anxiety reigns in my heart,
 Each day that I see not my love.

The *baberek*, or *birik-birik*, another nocturnal bird, is a harbinger of misfortune. This bird is said to fly in flocks at night; it has a peculiar note, and a passing flock makes a good deal of noise. If these birds are heard passing, the Pèrak peasant brings out a *sèngkalan* (a wooden platter on which spices are ground) and beats it with a knife or other domestic utensil, calling out as he does so: "*Nenek bawa hati-nia*" ("Great-grandfather, bring us their hearts"). This is an allusion to the belief that the bird *baberek* flies in the train of the Spectre Huntsman (*hantu pemburu*), who roams Malay forests with several ghostly dogs, and whose appearance is the forerunner of disease or death. "Bring us their hearts" is a mode of asking for some of his game, and it is hoped that the request will delude the *hantu pemburu* into the belief that the applicants are *ra'iyat*, or followers, of his, and that he will, therefore, spare the household.

The *baberek*, which flies with the wild hunt, bears a striking resemblance to the white owl, *Totosel*, the nun who broke her vows and now mingles her "*tutu*" with the "*holea*" of the Wild Huntsman of the Hartz.*

The legend of the Spectre Huntsman is thus told by the Pèrak Malays:—

In former days, at Katapang, in Sumatra, there lived a man whose wife, during her pregnancy, was seized with a violent longing for the meat of the *pelandok* (mouse-deer). But it was no ordinary *pelandok* that she wanted. She insisted that it should be a doe, big with male offspring, and she bade her husband go and seek in the jungles for what she wanted. The man took his weapons and dogs and started, but his quest was fruitless, for he had misunderstood his wife's injunctions, and what he sought was a *buck pelandok*, big with male offspring, an unheard-of prodigy. Day and night he hunted, slaying innumerable mouse-deer, which he threw away on finding that they did not fulfil the conditions required. He had sworn a solemn oath on leaving home that he would not return unsuccessful, so he became a regular denizen of the forest, eating the flesh and drinking the blood of the animals which he slew, and pursuing night and day his fruitless search. At length he said to himself: "I have

* Dawn of History, p. 171.

"hunted the whole earth over without finding what I want; it is now time to try the firmament." So he holla'd on his dogs through the sky, while he walked below on the earth looking up at them, and after a long time, the hunt still being unsuccessful, the back of his head, from constantly gazing upwards, became fixed to his back, and he was no longer able to look down at the earth. One day, a leaf from the tree called *Si Limbak* fell on his throat and took root there and a straight shoot grew upwards in front of his face. In this state he still hunts through Malay forests, urging on his dogs as they hunt through the sky, with his gaze evermore turned upwards.

His wife, whom he had left behind when he started on the fatal chase, was delivered in due time of two children—a boy and a girl. When they were old enough to play with other children, it chanced one day that the boy quarrelled with the child of a neighbour with whom he was playing. The latter reproached him with his father's fate, of which the child had hitherto been ignorant, saying: "Thou art like thy father, who has become an evil spirit, ranging the forests day and night and eating and drinking no man knows how. Get thou to thy father." Then the boy ran crying to his mother and related what had been said to him. "Do not cry," said she, "it is true, alas! that thy father has become a spirit of evil." On this the boy cried all the more, and begged to be allowed to join his father. His mother yielded at last to his entreaties, and told him the name of his father and the names of the dogs. He might be known, she said, by his habit of gazing fixedly at the sky and by his four weapons—a blow-pipe (*sumpitan*), a spear, a kris, and a sword (*klewang*). "And," added she, "when thou hearest the hunt approaching, call upon him and the dogs by name and repeat thy own name and mine so that he may know thee."

The boy entered the forest, and, after he had walked some way, met an old man, who asked him where he was going. "I go to join my father," said the lad. "If thou findest him," said the old man, "ask him where he has put my chisel which he borrowed from me." This the boy promised to do, and continued his journey. After he had gone a long way, he heard sounds like those made by people engaged in hunting. As they approached, he repeated the names which his mother had told him, and

immediately found himself face to face with his father. The hunter demanded of him who he was, and the child repeated all that his mother had told him, not forgetting the message of the old man about the chisel.* Then the hunter said: "Truly thou art my son. As for the chisel it is true that when I started from house I was in the middle of shaping some bamboos to make steps for the house. I put the chisel inside one of the bamboos. Take it and return it to the owner. Return now and take care of thy mother and sister. As for he who reproached thee, hereafter we will repay him. I will eat his heart and drink his blood, so shall he be rewarded." From that time forward the Spectre Huntsman has afflicted mankind, and many are those whom he has destroyed. Before dismissing his son, he desired him to warn all his kindred never to use bamboo for making steps for a house and never to hang clothes to dry from poles stuck in between the joists supporting the floor, and thus jutting out at right angles with a house,† "lest," said he, "I should strike against such poles as I walk along." "Further," he continued, "when ye hear the note of the bird *birik-birik* at night, ye will know that I am walking near." Then the boy returned to his mother and delivered to her and to all their kindred the injunctions of the lost man. One account says that the woman followed her spectre husband to the forest, where she joins in the chase with him to this day, and that they have there children born in the woods. The first boy and girl retained their human form, according to this account, but some Pawangs say that the whole family are in the forest with the father.

* The episode of the chisel, which here seems to be meaningless, connects this legend with the beliefs of the Bataks and of the Balinese regarding earthquakes. If an earthquake occurs, the Batak calls out *Sokul* (the handle of a chisel), in allusion to the chisel of Batara Guru, which was broken during the creation of the world when a raft was being made for the support of the earth. See Kawi Language and Literature, VAN DER TRUK, *Journal of the Royal Asiatic Society*, XIII., N. S., Part I., p. 60.

† In explanation of this, it may be necessary to remark that Malay houses are built on wooden posts, so that the floor is raised off the ground to a height varying from three to six feet. A horizontal pole, wedged into the framework of the floor from the outside, would thus stick out at right angles to the house and obstruct a passer-by.

Numerous *mantra*, or charms, against the evil influence of the Wild Huntsman are in use among the Pawangs, or medicine-men, of Pêrak. These are repeated, accompanied by appropriate ceremonies, when the disease from which some sick person is suffering has been traced to an encounter with the *hantu pemburu*.

The following may serve as a specimen :—

Bi-smi-llâhi-r-rahmâni-r-rahin.

Es-salamu 'alaykum Hei Si Jidi laki Mah Judah.

Pergi buru ka-rimba Ranchah Mahang.

Katapang nama bukit-nia,

Si Laugsat nama anjing-nia,

Si Kumbang nama anjing-nia,

Si Nibong nama anjing-nia,

Si Pintas nama anjing-nia,

Si Aru-Aru nama anjing-nia,

Timiang Balu nama sumipitan-nia,

Lankapuri nama lembing-nia,

Singku-buana nama mata-nia,

Pisan runt panjang ulu

Akan pambah pinang berbula.

Iai-luh pisan runt deripada Maharaja Guru.

Akan pambah prut hantu pemburu.

Aku tahu asal angkan mula menjadi orang Katapang.

Palang-luh angkan ku rimba Ranchah Mahang.

Jagan angkan meniakit-meniakit padu tuboh badan-ku.

"In the name of God, the Compassionate, the Merciful.
Peace be on thee, O Si Jidi husband of Mah Judah.

Go thou and hunt in the forest of Ranchah Mahang.

Katapang is the name of thy hill,

Si Laugsat is the name of thy dog,

Si Kumbang is the name of thy dog,

Si Nibong is the name of thy dog,

Si Pintas is the name of thy dog,

Si Aru-Aru is the name of thy dog,

Timiang Balu is the name of thy blow-pipe,

Lankapuri is the name of thy pipe,

Singha-buana is the name of its blade,
 The peeling-knife with a long handle
 Is to split in twain the fibrous betel-unt;
 Here is a knife from Maharaja Gurn
 To cleave the bowels of the Hunter-Spirit.
 I know the origin from which thou springest,
 O man of Katapang.
 Get thee back to the forest of Ranchali Mahang.
 Afflict not my body with pain or disease."^o

In charms intended to guard him who repeats them, or who wears them written on paper, against the evil influences of the Spectre Huntsman† the names of the dogs, weapons, &c., constantly vary. The origin of the dreaded demon is always, however, ascribed to Katapang in Sumatra. This superstition strikingly resembles the European legends of the Wild Huntsman, whose shouts the trembling peasants hear above the storm. It is, no doubt, of Aryan origin, and, coming to the Peninsula from Sumatra, seems to corroborate existing evidence tending to shew that it is partly through Sumatra that the Peninsula has received Aryan myths and Indian phraseology. A superstitious prejudice against the use of bamboo in making a step-ladder for a Malay house and against drying clothes outside a house on poles stuck into the framework, exists in full force among the Pénak Malays. The note of the *birik-birik* at night, telling as it does of the approach of the *hantu pemburu*, is listened to with the utmost dread and misgiving. The Bataks in Sumatra call this bird by the same name—*birik-birik*. It is noticeable that in Batak legends regarding the creation of the world, the origin of mankind is ascribed to *Putri-Orta-Bulan*, the daughter of *Butara-Guru*, who descended to the earth with a white owl and a dog.‡

* See a similar charm, for protection against this spirit, in use among one of the wild tribes of the peninsula, *Journal of the Indian Archipelago*, I., 316. In the charm given in the text the names of the forest, dogs and blow-pipe are Malay, *Lankapuri* is the Sanskrit name for the island of Ceylon, and *Singha-buana* seems to be composed of two Sanskrit words meaning "lion" and "world."

† Four or five different versions are in my possession.

‡ MARSDEN—*History of Sumatra*, 385. An imperfect version of the story of the *hantu pemburu* is to be found in DE BACKER'S *L'Archipel Indien*.

HOUSES.

The superstitions about houses are of infinite number and variety. It is unlucky to place the ladder or steps, which form the approach to a Malay house, in such a position that one of the main rafters of the roof is exactly over the centre of them. Quarrels or fighting in the house will certainly be the result. In selecting timber for the uprights of a Malay house care must be taken to reject any log which is indented by the pressure of any parasitic creeper which may have wound round it when it was a living tree. A log so marked, if used in building a house, exercises an unfavourable influence in child-birth, protracting delivery, and endangering the lives of mother and child. Many precautions must be taken to guard against evil influences of a similar kind, when one of the inmates of a house is expecting to become a mother. No one may "divide the house" (*bĕlah rumah*,) that is, go in at the front door and out by the back, or *rice versa*, nor may any guest or stranger be entertained in the house for one night only; he must be detained for a second night to complete an even period. If an eclipse occurs, the woman on whose account these observances are necessary must be taken into the *penunggu* (kitchen) and placed beneath the shelf or platform (*para*) on which the domestic utensils are kept. A spoon is put into her hand. If these precautions are not taken, the child, when born, will be deformed.

To trip on the steps, or to knock one's head against the lintel (Malay door-ways are always inconveniently low) on leaving a house, is unlucky, and if the person to whom this happens is starting upon any business, it must be postponed, and he must stay at home, for the accidents mentioned forbode death. It is also unlucky to start on a journey when rain is falling, for the rain signifies *ayer mata* (tears).

It is unlucky for any one to stand with his arms resting on the steps of a ladder going up to a house for the purpose of talking to one of the inmates. The reason is, that if a corpse is carried out of the house, there must be a man below in this position to receive it. To assume this attitude unnecessarily, therefore, is to wish for a death in the family (*menyuroh kap*).

LANGKAT.

The Malays share with most other Eastern nations the supersti-

tion which demands that great attention should be paid to the selection of lucky days and lucky hours for the commencement of any important undertaking. The failure of an enterprise, or the bad weather which may happen to attend a journey, is often ascribed to insufficient care in selecting a time when all the conditions for the start- (*langkah*)^{*} should be propitious. There are numerous methods of ascertaining lucky and unlucky days and times, but the ceremonies do not end with the fixing of the time. While waiting for the lucky moment to arrive, a Raja or Chief who is about to start on a journey remains alone in the house, while his attendants stand below in readiness. When at length he descends the steps, his path must not be crossed by any one, nor may any one stand in front of the door. If he knocks his head against the lintel, or catches his great toe in any obstacle, the start is given up, and he returns to the house. If he reaches the ground without accident (*kachak halaman*), he meditates upon a prescribed formula which he repeats in his mind. He avoids the centre of the *halaman* (open space or yard in front of a house), which is called by the Malays *tanah kubur* ("the site of tombs"), and directs his course towards the right.

A journey so begun may last an indefinite time without impairing the efficacy of the good fortune ensured by the observance of the proper ceremonies on starting. The whole journey, *e. g.*, a pilgrimage to Mecca, is covered by them, and the good luck ensured thereby ends only when the house is again reached on the return of the traveller. Some Malays, however, prefer to renew the *langkah* every Friday.

One of the methods of ascertaining what particular times will be auspicious, or the reverse, is called *si bongkok* ("the bent one"). The thumb of one hand is closed, and the two joints and threespaces thus formed are made to represent, early morning (*pagi-pagi*), forenoon (*tengah naik*), midday (*tengah hari*), afternoon (*tengah turun*), and evening (*petang-petang*). Different degrees of fortune may be expected according as the periods named fall to the different joints and spaces of the thumb. Another system is called *si tandok* ("the horn"). It is a calculation on paper by means of a design in the shape of a horn, of different parts of which

* Sanskrit *laugh*, to stride.

different qualifications are attributed. Good or evil fortune may be expected according as the various periods fall to the various portions of the design. Numerous Malay treatises on this, to them all-important, subject exist. One well-known one is called *Sedang Budiman*. The most popular, perhaps, are those which treat of the five ominous times (*katika lima*) and the seven ominous times (*katika tujuh*). The latter are ruled by the *bin-tang tujuh* (the seven planets), which the Malays enumerate as follows: *Shems*, the sun; *Kawr*, the moon; *Marik*, Mars; *Utarid*, Mercury; *Zahrat*, Venus; *Mustari*, Jupiter; *Zahal*, Saturn. Tables are drawn up assigning the influence of one of these to every hour of the week, and the nature of the influence which each planet is supposed to exercise is fully explained.

THE RAINBOW.

Palangi, the usual Malay word for the rainbow, means "striped." The name varies, however, in different localities. In Pêrak it is called *palaugi minum* (from a belief that it is the path by which spirits descend to the earth to drink), while in Penang it is known as *ular daun* ("the snake daun"). In Pêrak, a rainbow which stretches in an arch across the sky is called *bantal* ("the pillow") for some reason which I have been unable to ascertain. When only a small portion of a rainbow is visible, which seems to touch the earth, it is called *tunggul* ("the flag"), and if this is seen at some particular point of the compass—the West, I think,—it betokens, the Pêrak Malays say, the approaching death of a Raja.

Another popular belief is that the ends of the rainbow rest on the earth, and that if one could dig at the exact spot covered by one end of it, an untold treasure would be found there. Unfortunately, no one can ever arrive at the place.

SUNSET.

Sunset is the hour when evil spirits of all kinds have most power. In Pêrak, children are often called indoors at this time to save them from unseen dangers. Sometimes, with the same object, a

* *Dhanuk*, in Hindustani, means "a bow" and is a common term in India, among Hindus, for the rainbow; *dhannu* and *dhanush* also signify "a bow," *dhannu* is used for the sign Sagittarius. All these words are of Sanskrit origin.

woman belonging to a house where there are young children will chew up *kuniet lerus* (an evil-smelling root, supposed to be much disliked by demons of all kinds) and spit it out at seven different points as she walks round the house.

The yellow glow which spreads over the western sky, when it is lighted up with the last rays of the dying sun, is called *mambang kuning* ("the yellow deity"), a term indicative of the superstitious dread associated with this particular period. The fact that a Sanskrit phrase *senja kala* (*samdhya kala*) is employed in Malay to describe the evening twilight, is not without significance in connection with some of these superstitions.

AVOIDANCE OF COW-BEEF.

Among the modern Malays, avoidance of the flesh of swine, and of contact with anything connected with the unclean animal is, of course, universal. No tenet of El-Islam is more rigidly enforced than this. It is singular to notice, among a people governed by the ordinances of the Prophet, traces of the observance of another form of abstinence enjoined by a different religion. The universal preference of the flesh of the buffalo to that of the ox, in Malay countries, is evidently a prejudice bequeathed to modern times by a period when cow-beef was as much an abomination to Malays as it is to the Hindus of India at the present day. This is not admitted or suspected by ordinary Malays, who would probably have some reason, based on the relative wholesomeness of buffalo and cow-beef, to allege in defence of their preference of the latter to the former.

ANIMALS.

The wild animals which inhabit the forests of the Peninsula have naturally enough an important place in the folklore of the Malays. The tiger is sometimes believed to be a man or demon in the form of a wild beast, and to the numerous aboriginal superstitions which attach to this dreaded animal, Muhammadanism has added the notion which connects the tiger with the Khalif ALI. One of ALI's titles throughout the Moslem world is "the victorious Lion of the Lord," and in Asiatic countries where the lion is unknown, the *tiger* generally takes the place of the king of beasts.

The bear is believed to be the mortal foe of the tiger, which he sometimes defeats in single combat. (*Bruang*, the Malay word for "bear," has a curious resemblance to our word "Bruin.") A story is told of a tame bear which a Malay left in charge of his house and of his sleeping child while he was absent from home. On his return, he missed his child, the house was in disorder as if some struggle had taken place, and the bear was covered with blood. Hastily drawing the conclusion that the bear had killed and devoured the child, the enraged father slew the animal with his spear, but almost immediately afterwards he found the carcass of a tiger, which the faithful bear had defeated and killed, and the child emerged unharmed from the jungle where she had taken refuge. It is unnecessary to point out the similarity of this story to the legend of Beth-Geleert.* It is evidently a local version of the story of the Ichneumen and the Snake in the Pancha-tantra.

A mischievous tiger is said sometimes to have broken loose from its pen or fold (*pechak kandang*). This is in allusion to an extraordinary belief that, in parts of the Peninsula, there are regular enclosures where tigers possessed by human souls live in association. During the day they roam where they please, but return to the *kandang* at night!

The superstitious dread entertained by Malays for the larger animals, is the result of ideas regarding them, which have been inherited from the primitive tribes of Eastern Asia. Muhammadanism has not been able to stamp out the deep-rooted feelings which prompted the savage to invest the wild beasts which he dreaded with the character of malignant deities. The tiger, elephant, and rhinoceros were not mere brutes to be attacked and destroyed. The immense advantages which their strength and bulk gave them over the feebly armed savage of the most primitive tribes, naturally suggested the possession of supernatural powers; and propitiation, not force, was the system by which it was hoped to repel them. The Malay addresses the tiger as *Datoh* (grand-father), and believes that many tigers are inhabited by human souls. Though he reduces the elephant to subjection, and uses him as a beast of

* Similar Geleert stories are current in Sind. BURTON—Sind Re-visited, II., 89, 303.

burden, it is universally believed that the observance of particular ceremonies, and the repetition of prescribed formulas, are necessary before wild elephants can be entrapped and tamed. Some of these spells and charms (*mantra*) are supposed to have extraordinary potency, and I have in my possession a curious collection of them, regarding which, it was told me seriously by a Malay, that in consequence of their being read aloud in his house three times, all the hens stopped laying! The spells in this collection are nearly all in the Siamese language, and there is reason to believe that the modern Malays owe most of their ideas on the subject of taming and driving elephants to the Siamese. Those, however, who had no idea of making use of the elephant, but who feared him as an enemy, were doubtless the first to devise the idea of influencing him by invocations. This idea is inherited, both by Malays and Siamese, from common ancestry.

In the case of the crocodile, again, we find an instance of a dangerous animal being regarded by Malays as possessed of mysterious powers, which distinguish him from most of the brute creation, and class him with the tiger and elephant. Just as in some parts of India sacred crocodiles are protected and fed in tanks set apart for them by Hindus, so in Malay rivers here and there, particular crocodiles are considered *kramat* (sacred), and are safe from molestation. On a river in the interior of Malacca, I have had my gun-barrels knocked up when taking aim at a crocodile, the Malay who did it immediately falling on his knees in the bottom of the boat and entreating forgiveness on the ground that the individual reptile aimed at was *kramat*, and that the speaker's family would not be safe if it were injured. The source of ideas like this lies far deeper in the Malay mind than his Muhammadanism, but the new creed has, in many instances, appropriated and accounted for them. The connection of the tiger with Aja, the uncle of the prophet, has already been explained. A grosser Muhammadan fable has been invented regarding the crocodile.

This reptile, say the Perak Malays, was first created in the following manner:—

There was once upon a time a woman called *Putri Padang Gerinsing*, whose petitions found great favour and acceptance with the Almighty. She it was who had the care of SITI FATIMA, the

daughter of the prophet. One day she took some clay and fashioned it into the likeness of what is now the crocodile. The material on which she moulded the clay was a sheet of *upih* (the sheath of the betel-nut palm). This became the covering of the crocodile's under-surface. When she attempted to make the mass breathe it broke in pieces. This happened twice. Now it chanced that the Tuan Putri had just been eating sugar-cane, so she arranged a number of sugar-cane joints to serve as a backbone, and the peelings of the rind she utilised as ribs. On its head she placed a sharp stone and she made eyes out of bits of saffron (*kuniet*); the tail was made of the mid-rib and leaves of a betel-nut frond. She prayed to God Almighty that the creature might have life, and it at once commenced to breathe and move. For a long time it was a plaything of the prophet's daughter, SITI FATIMA, but it at length became treacherous and faithless to Tuan Putri Padang Gerinsing, who had grown old and feeble. Then FATIMA cursed it saying: "Thou shalt be the crocodile of the sea, no enjoyment shall be thine, and thou shalt not know lust or desire." She then deprived it of its teeth and tongue, and drove nails into its jaws to close them. It is these nails which serve the crocodile as teeth to this day.

Malay Pawangs in Perak observe the following methods of proceeding when it is desired to hook a crocodile. To commence with, a white fowl must be slain in the orthodox way by cutting its throat, and some of its blood must be rubbed on the line (usually formed of rattan) to which the fowl itself is attached as bait. The dying struggles of the fowl in the water are closely watched and conclusions are drawn from them as to the probable behaviour of the crocodile when hooked. If the fowl goes to a considerable distance, the crocodile will most likely endeavour to make off, but it will be otherwise if the fowl moves a little way only up and down, or across the stream. When the line is set, the following spell must be repeated: "*Aur Dangsari kamala sari, sambut kirin Tuan Putri Padang Gerinsing tidak di sambut mata angkau chqbut.*" ("O Dangsari, lotus, flower, receive what is sent thee by the Lady Princess Padang Gerinsing; if thou receivest it not, may thy eyes be torn out"). As the bait is thrown into the water the operator must blow on it three times, stroke it three times, and thrice

repeat the following sentence, with his teeth closed and without drawing breath: "*Kun kata Allah sapaya kun kata Muhammad tab paku.*" ("*Kun* saith God, so *kun* saith Muhammad; nail be fixed"). Other formulas are used during other stages of the proceedings.

The deer (*rusa*) is sometimes believed to be the metamorphosed body of a man who has died of an abscess in the leg (*chabuk*), because it has marks on the legs which are supposed to resemble those caused by the disease mentioned. Of course, there are not wanting men ready to declare that the body of a man who has died of *chabuk* has been seen to rise from the grave and to go away into the forest in the shape of a deer.

It is lucky to keep cats. The essentially selfish nature of this animal is recognised by the Malays, who say that it always longs for the prosperity of its master, a consummation likely to give it a larger and softer cushion to lie upon! The dog, on the other hand, is unlucky. He longs for the death of his master, an event which will involve the slaying of animals at the funeral feast, when the bones will fall to the dogs. When a dog is heard howling at night he is supposed to be thinking of the broken bones (*niat hendak mengutip tulang patak*).

Many Malays refuse to eat the fresh-water fish called *ikan belidak* on the plea that it was originally a cat. They declare that it squalls like a cat when harpooned, and that its bones are very white and fine like a cat's hairs. Similarly, the *ikan tumuli* is believed to be a human being who has been drowned in the river, and the *ikan kalul* to be a monkey transformed. Some specially-favoured observers have seen monkeys half through the process of metamorphosis—half-monkey and half-fish!

MISCELLANEOUS.

To be long in getting up after a meal, is said to be a bad omen. It means that the person, if unmarried, will meet with a bad reception from his or her parents-in-law hereafter. The Malay saying in the vernacular is "*Lambat bangket deri tempat makan, lambat di-tegur menturut.*"

Clothes which have been nibbled by rats or mice must not be worn again. They are sure to bring misfortune, and are generally given away in charity.

If rain falls on a wedding day, Malays in some districts say that either the bride or bridegroom must have been eating out of the stewpan (*makan dalam kualí*). When a Malay dinner is served, the younger members of the family sometimes amuse themselves by throwing rice into the pan from which the curry has just been taken, stirring it round in the gravy that remains, and then eating it. This is not permitted when one of them is to be married on the following day, as it would be sure to bring rainy weather.

It is unlucky for a child to lie on his face (*menyehrap*) and kick his feet together in the air (*menyabong kaki*). It betokens that either his father or mother will die. A child seen doing this is instantly rebuked and stopped.

When a star is seen in apparent proximity to the moon, old people say there will be a wedding shortly. The wide-spread superstition about the man in the moon is found among the Malays. They discover in the moon an old man sitting under a *beringin* tree (the banyan, *ficus indica*).

The entrance into a house of an animal which does not generally seek to share the abode of man, is regarded by the Malays as ominous of misfortune. If a wild bird flies into a house, it must be carefully caught and smeared with oil, and must then be released in the open air, a formula being recited in which it is bidden to fly away with all the ill-luck and misfortunes (*sial jambalang*) of the occupier. An iguana, a tortoise, and a snake are perhaps the most dreaded of these unnatural visitors. They are sprinkled with ashes, if possible, to counteract their evil influence.

A swarm of bees settling near a house is an unlucky omen and prognosticates misfortune.

The evil eye is dreaded by Malays. Not only are particular persons supposed to be possessed of a quality which causes ill-luck to accompany their glance (the *mal'occhio* of the Italians), but the influence of the evil eye is often supposed to affect children,* who are taken notice of by people kindly disposed towards them. For instance, it is unlucky to remark on the fatness and healthiness of

* See LANGE's *Modern Egyptians*, I, 77; also the same author's translation of the *Thousand and One Nights*, Chapter IV., notes 24 and 41, where, in evidence of the antiquity of this superstition, he quotes a well-known line of Virgil:—

"Nescio quis teneros oculus mihi fascinat agnos."

a baby, and a Malay will employ some purely nonsensical word, or convey his meaning in a roundabout form, rather than incur possible misfortune by using the actual word "fat." "*Ai bukan-niapoh-poh gentel budak ini*" ("Isn't this child nice and round?") is the sort of phrase which is permissible:

If a woman dies in child-birth, either before delivery, or after the birth of a child and before the forty days of uncleanness have expired, she is popularly supposed to become a *langsuyar*, a flying demon of the nature of the "white lady" or "*banshee*." To prevent this, the following precautions are sometimes taken in Pêrak: a quantity of glass beads are put in the mouth of the corpse, a hen's egg is put under each arm-pit and needles are placed in the palms of the hands. It is believed that if this is done the dead woman cannot become a *langsuyar*, as she cannot open her mouth to shriek (*ngilai*), or wave her arms as wings, or open and shut her hands to assist her flight.

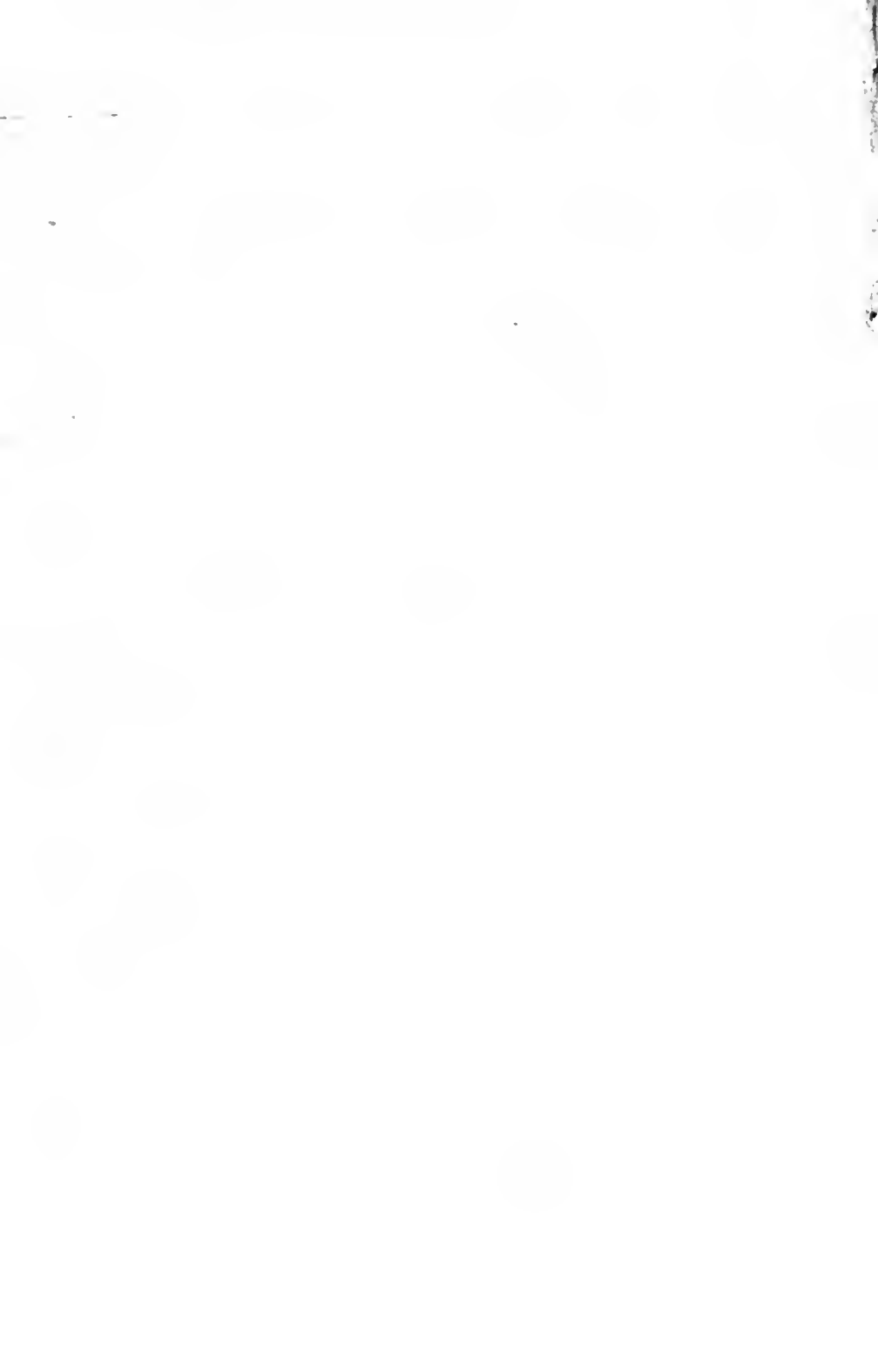
Bujang ("single," "solitary," and hence in a secondary sense "un-married") is the Sanskrit word *bhujangga* "a dragon". "*Bujang Maluka*," a mountain in Pêrak, is said by the Malays of that State to have been so called because it stands *alone*, and could be seen from the sea by traders who plied in old days between the the Pêrak river and the once-flourishing port of Malacca. But it is just as likely to have been named from some forgotten legend in which a dragon played a part. Dragons and mountains are generally connected in Malay ideas. The caves in the limestone hill, Gunung Pondok, in Pêrak, are said to be haunted by a *genius loci* in the form of a snake who is popularly called *Si Bujang*. This seems to prove beyond doubt the identity of *bujang* with *bhujangga*. The snake-spirit of Gunung Pondok is sometimes as small as a viper and sometimes as large as a python, but he may always be identified by his spotted neck, which resembles that of the wood-pigeon (*tekukur*). Landslips on the mountains, which are tolerably frequent during very heavy rains, and which, being produced by the same cause, are often simultaneous with the flooding of rivers and the destruction of property, are attributed by the natives to the sudden breaking forth of dragons (*naga*) which have been performing religious penance (*ber-tapa*) * in the mountains, and which are making their way to the sea.

* Sanskrit *tapasya*.

The foregoing are only a few specimens of the legends, sayings, superstitions, and peculiarities of the Malays, which may be collected by any one who is resident among them and conversant with their language. Though, in many instances, they are puerile and foolish, they are not without value for the sake of comparison with the superstitious beliefs of other races.

There would be more observers of curious customs and beliefs among the Malays if Englishmen in these latitudes would get out of the habit of regarding the Malays simply as a Muhammadan people inhabiting the countries in the vicinity of the Straits of Malacca. Let them regard the Muhammadanism of the Malay as an accident not to be taken into account in studying the character and tracing the origin of the people. The Asiatic Malay is physically the same, from Sumatra eastward to Borneo, and many legends, customs, and superstitions which are found among the heathen Bataks of Sumatra, the wild tribes of the Peninsula, and the Dayaks of Borneo, belong equally to the more civilised Malay tribes, those who have accepted Muhammadanism, and who, on that account, are popularly and erroneously supposed to be a different race.





NOTES ON THE RAINFALL OF SINGAPORE.

BY J. J. L. WHEATLEY.

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The amount of Rainfall in Singapore having been a topic very frequently discussed, it is with some diffidence the accompanying tables are submitted. Any one who applies himself to the study of this subject, cannot but feel, at the very threshold of his labours, how little he has to help him, and how difficult it is to arrive at any definite conclusion.

For some years back, I have tried to collect as much information as was possible on the rainfall of this Settlement, but find that very little indeed can be done in this matter. Whatever records of rainfall may have been kept in times past, all that are at present available, are:—

- 1.—Statements of the number of rainy days in each year, from 1820 to 1825.
- 2.—A Statement of Rainfall for the year 1835.
- 3.—Observations made at the Singapore Observatory, for the years 1841 to 1844, and for the first nine months of 1845.
- 4.—After a large gap of seventeen years, Mr. J. D. VAUGHAN's Observations, from 1862 to 1866, whose returns were published quarterly in the local *Government Gazette*.
- 5.—Meteorological Observations, which were commenced by the late Dr. RANDELL, Principal Civil Medical Officer, Straits Settlements, in 1869, and which are maintained to the present time. The Monthly Returns of these were published for many years in the *Government Gazette*, but of late years they have been discontinued. The P. C. M. O., however, supplies the press, public institutions, &c., with a yearly copy of Monthly Returns, both of Meteorological Observa-

tions, and of the Rainfall, which is now registered at seven stations. Annual Returns are also to be found in the Blue Books.

- 6.—Lastly, but not least, a Register of Rainfall kept by Mr. A. KNIGHT, since 1861, at Mount Pleasant, Thompson Road (about three miles distant from Town), and I must here express my deep obligation to him for his kindness in supplying me with the required information, and for revising the Tables of his range.

Though the rainfall at Singapore is now registered at seven stations, it is not intended to notice the whole of them, nor to act on the *means* of the total registered rainfall, but only to take the returns of the Criminal Prison, extending over a period of twelve years, as a register of rainfall in the town; and Mr. KNIGHT's returns, extending over a period of seventeen years, as a register of rainfall in the country; as they are the two best sources of information for the consideration of this question.

From time to time, letters have appeared in the local newspaper, asserting that the extensive clearing of forests in Singapore, and the adjoining mainland of Johor has materially affected the rainfall. In proof of this, the experience of the "oldest inhabitant" is appealed to, to bear testimony to the incessant daily fall of rain of former years, and the conclusion is hence drawn, that the rainfall will be altogether suspended if something be not, without delay, undertaken to stop this disafforestation of the island and peninsula.

It is not the object of the writer to enter into any lengthy discussion on this point. The sole object of this compilation of tables is, to bring together sources of information on this subject which are of value, but are now scattered, extending over many books and Gazettes, buried out of sight, and thus practically lost for convenient reference and research under this head in the future.

But, it may be safely advanced, that Singapore is *not* dependent on its extent of forests, or contiguity to forests, for its rain supply, but to its geographical position. In the Journal of the Indian Archipelago, vol. 2, page 457, Dr. LITTLE, writing on the Medical Topography of Singapore so far back as 1848—thirty-three years ago,—gives the average annual rainfall as being 92.697 inches; arriving at this conclusion from the records of the Singapore

Observatory during 1811 to 1844—a period of four consecutive years; and the average annual number of wet days was set down at 185 days, or a little over one-half the year, this last conclusion being drawn from the observations of broken periods as below:—

During 1820 there were 229 wet days*

"	1821	"	203	"
"	1824	"	136	"
"	1825	"	171	"
<hr/>				
739				"

185 average of 4 years,

but searching for information on this point, I am enabled to fill up the break, and we have:—

During 1820 there were 229 wet days

"	1821	"	203	"
"	1822	"	218	"
"	1823	"	208	"
"	1824	"	136	"
"	1825	"	171	"
<hr/>				
1,165				"

giving 194 as the average of 6 years.

It would appear, that during the early days of the Settlement, which only dates from 1819, from want of a rain guage (due to the difficulties attendant on first occupation, and of getting things from India), all that was attempted, was, to keep a register of the readings of the thermometer and barometer (which every ship carried), and a note only made of the number of fair days and wet days. The earliest record of a register of rainfall that can be traced is that of 1835.

It is, however, interesting to note that the accepted average annual rainfall of 1841 to 1844, has not been affected notwithstanding the extensive clearing of forest that must have taken place during the past forty years, for the average of Mr. KNIGHT's register (Table III.) keeps a little above it, viz., 93.94 inches, while the

*By wet or rainy days, is understood days on which rain in more or less varying quantities from one-hundredth of an inch has been registered.

average of the Prison register is more markedly in excess, being 99.96 inches (Table II.). The average annual number of wet days, as will be seen from Tables IV. and V., has only to a small extent been diminished in the Prison Register, but exceeded in Mr KNIGHT's. That there are seasons of marked falling off of the rainy season, is noticeable so early as 1824; and the order of their recurrence is worth studying. The *smallest* number of wet days, as recorded, is 109 in 1877, during which year, as will be seen on referring to Table VIII., the second half of the South-West monsoon was almost a complete failure, while the *greatest* number of wet days in recent years was 212 days in 1871, and 244 in 1879 at Mr. KNIGHT's place: this last even exceeding that given for 1820.

The heavy falls of rain do not appear to be confined to any particular month. They are most frequent during the first half of the North-East monsoon, that is, the months of November, December and January. There are no recorded heavy rainfalls for February or July, and, but for one instance recorded by Mr. VAUGHAN, none in March also. These are best shown as below:—

	Mr. VAUGHAN's register.	Prison register.	Mr. KNIGHT's register.
January, ...	1	2	4
February, ...	...	...	...
March, ...	1	...	...
April, ...	1	...	1
May, ...	...	2	2
June, ...	...	1	1
July, ...	...	...	...
August, ...	...	2	2
September, ..	...	1	1
October, ...	...	1	...
November, ..	...	2	1
December, ..	2	1	5

DROUGHTS.—This word must be used guardedly, and can only apply in a limited sense. I have, therefore, shown it in Tables VI. and VII. as *the greatest consecutive number of days without rain in each month*. According to Table VI., the greatest interval without

rain has been only seventeen days; but in considering this, allowance has to be made liberally; for instance, from the 22nd September, 1877, to 8th October, there was no rain, but between 9th and 23rd October, there were small drizzlings of rain, viz.:—

On the 9th to the extent of 0.09 inches.

„	10th	„	0.03	„
„	14th	„	0.03	„
„	22nd	„	0.05	„

the first shower being on 23rd, when 0.35 was registered, so that though there were days of small droppings of rain which intervened, the season of dryness was actually from 22nd September to 23rd October; and, in like manner, other instances may be adduced. But even with this drawback, these tables will, I think, be found of value, as they give a fair representation. The greatest interval without rain ranging from 7 to 17 days in town, and from 7 to 23 days in the country.

It is not possible to obtain information of this nature from condensed annual tabulated statements of former years. Mr. VAUGHAN's are the earliest available for this sort of analysis, and from them I gather, that the longest interval recorded by him as being without rain, was from 27th January to 2nd March, 1864, or 35 days; during which period *no* rainfall was registered, though on the 23rd and 26th February there was a "small sprinkling," but nothing appreciable by the gauge. Mr. KNIGHT, whose register commences at this time, also notes this extended drought of 35 days, the showers registered during this interval being two, viz., one to the extent of 0.03 inches, and the other to the extent of 0.14 inches, this last only reaching Mr. VAUGHAN, at River Valley Road, as a "small sprinkling," not appreciable. Mr. KNIGHT, in a note when returning his tables which were sent for his revision says: "Your table has the disadvantage of not showing droughts when they extend from one month to another." This is fully admitted, and, as explained above, the tables are only to give an idea of the ordinary number of consecutive days without rain.

SEASONS.—In 1874, the late Dr. RANDELL, P. C. M. O., in submitting his Meteorological Report for 1873, proposed that, for the sake of convenience, the year should be divided into three periods of four months each; which he designated as *variable* for the first third, *dry* for the second third, and *wet* for the remaining portion.

With all deference for the opinion thus expressed, I am sure it will be evident to all who consider the subject, that the wisest plan is not to force or mould natural operations to artificial arrangements, but by studying Nature's plans, and, basing our calculations thereon, to get some insight (small though it be) into the wondrous and wise laws which govern this world.

We find one great influence at work, viz., the *Monsoons*, and in any observations from which correct inferences are intended to be drawn, this must not be lost sight of. The difficulty that one meets, at the very beginning of this enquiry, arises from the questions—"When do the monsoons commence?" "Is there a fixed day?" "How are they governed?" MAURY, in his *Physical Geography of the Sea*, says: "Monsoons are, for the most part, trade winds deflected, when, at stated seasons of the year, a trade wind is turned out of its regular course, as from one quadrant to another, it is regarded as a monsoon." *What then is the stated season?* This has engaged the attention of many; the "Wiseman" said "The wind goeth toward the South, and turneth about unto the North; it whirlleth about continually, and the wind returneth again according to his circuits;" but, *when* that stated season actually commences, is still beyond our telling.

The monsoons we have to deal with, are the North-East and South-West. To quote again from MAURY: "A force is exerted upon the North-East trade winds of that sea by the disturbance which the heat of summer creates in the atmosphere over the interior plains of Asia, which is more than sufficient to neutralize the forces which cause those winds to blow as trade-winds, it arrests them and turns them back." "These remarkable winds blow over all that expanse of Northern water that lies between Africa and the Philippine islands. Throughout this vast expanse, the winds that are known in other parts of the world as the North-East trades are here called monsoons, because, instead of blowing from that quarter for twelve months as in other seas, they only blow for six. During the remaining six months they are turned back as it were, for instead of blowing towards the Equator, they blow away from it, and instead of North-East trades we have South-West monsoon."

But, although the day of the commencement of either monsoon is not a fixed one, as far as is at present known, there is a time

when there is a turn, a "backing down" and "back to back" of the North-East and South-West winds, which differs, of course, according to latitude. In higher latitudes, the North-East monsoon may be said to have fairly set in during October, but for our low latitude it may roughly be put down as being established only in November. From November to the end of January, the North-East wind is blowing steadily; from February to April the struggle between North-East and South-West monsoons commences, and the result is *variable* breezes; from May to July, the South-West monsoon is the prevailing wind, losing its steadiness from August, till it is lost again in the next North-East monsoon by the end of October.*

Acting, therefore, on this natural division of seasons, a table has been prepared shewing the rainfall of each quarter (Table VIII.) thus arranged, and it will be noticeable, that the fall of the first portion of the North-East monsoon is (with only one exception in eleven years' registration) uniformly *greater* than the corresponding portion of the South-West monsoon; while the second half of the North-East monsoon is *less* than the corresponding season of the South-West; and that the fall of rain for the entire North-East monsoon is on the whole *greater* than that during the entire South-West: which may perhaps be accounted for by the North-East monsoon coming over a large watery expanse, unbroken by any high lands, whereas the rain-bearing clouds of the South-West monsoon are intercepted to a great extent by the island of Sumatra in our Southern and Western vicinity.

Under the present limited knowledge of Meteorology, it is almost impossible to lay down definite rules for guidance in making forecasts of weather except with the aid of the telegraph.† Men of science with skilfully arranged, delicate, sensitive instruments to detect every change of weather, &c., have devoted many years to its study, only to find themselves baffled. The Astronomer is far

* If it were possible to keep a constant hourly register of the wind as regards its direction, &c., the duration of each monsoon, and the changings from one to the other would be better understood.

† In America (United States) and in Europe, telegraphic reports of the state of the weather from various parts are received hourly at the head offices, and sometimes preparations can be made against impending bad weather. Some years back, a proposal was made from Amoy to arrange for a daily telegraphic report from Singapore and Batavia, but it has not come to anything.

ahead of the Meteorologist, in that he can foretell with wonderful precision the movements of the stars and planets, proving thereby of great assistance to the navigator, who determines his position at sea, by night as well as by day, with the aid of the carefully prepared tables of the Nautical Almanac.

The Astronomer knows what influences the planets bear on one another, and on this globe; singly, or in conjunction during their movements through space; but the Meteorologist is still only on the borders of the vast unknown, and cannot compete with the Astronomer; he is still only a recorder of events passing and past, and not a diviner of events to come. Though the barometer is, in some latitudes, a faithful monitor, too often, the change predicted comes about faster than it was anticipated, and he is left only to register that which *has* happened.

Notwithstanding all that has been done to get together such information as may help to unravel the mystery of the laws which govern Nature, there is much more still wanting; but we may entertain the hope, that in the perhaps not distant future, by the aid of faithfully recorded meteorological registers which at present seem of little value, some KEPLER or NEWTON will yet arise, and discover the effects of solar spots, and the influences of the celestial objects on our atmosphere from *without*; and the workings of this vast globe, generating, and maintaining electricity, magnetism and a host of other operations from *within*,* causes which operate no doubt in some recurrent order, guided and governed by solar and lunar cycles.† We may hope, that when it is understood how these causes act and react on one another, certain rules will be

* In Astronomy, KEPLER in 1609-1618 could never have arrived at the conclusions known as his LAWS, but for the labours of TYCHO BRAHE, who, about fifty years previously, laboured to collect a large amount of correct, trustworthy, facts uninteresting perhaps to many, but invaluable to KEPLER. With the advantage of the labours of these two, NEWTON, about fifty years later, was enabled to announce his Laws of Gravitation and the movements of the planets, &c., in their orbits; laws which have proved to be so correct, that about a hundred and fifty years later, with the Laws of NEWTON as the basis of operation, ADAMS in England, and LEVERRIER in France, fixed the position of an unknown disturber of the movements of *Uranus*, and discovered it to be the planet which has been named *Neptune*.

† Herr SCHWABE of Dessau calculates the recurrent cycles of Solar Spots at eleven years. A solar cycle is 28 years, and a lunar cycle 19 years.

framed, as has been done for the Astronomer, whereby that which now appears dark, doubtful and difficult, will be made clear, certain and simple; and the perils of the navigator at sea, the devastating effects of hurricanes on land, and the distress and want of fauines will be foreseen and provided against with certainty.

Admiral FITZROY, in his Weather Book, says: "Having accurate statistical observations of the various currents of air at selected outlying stations shewing pressure or tension, temperature and relative dryness, with the direction and estimated horizontal force of wind at *each place simultaneously*, the dynamic consequences are already measurable approximately on geometric principles, and, judging by the past, there appears to be reasonable ground for expectation that meteorologic dynamics will soon be subjected to mathematical analysis and accurate formulas." And again: "Certain it is, that although our conclusions may be incorrect and our judgment erroneous, the laws of Nature and the signs afforded to man are invariably true. Accurate interpretation is the real deficiency."

It appears from superficial observations, and the inferences one can draw from having only a very faint idea of this subject, that until at least there are trustworthy records of periods extending over two or three solar cycles, it would be futile to hazard, even by guessing, a rule by which the Rainfall of Singapore can be calculated upon. If, therefore, this Society will endeavour to collect all possibly accurate returns of the rainfall, &c., it will be doing great service to those who may study the Meteorology of this part of the world from the tables thus preserved, when this generation shall have passed away.

Nothing in this paper is intended to dispute or question the accepted and well known fact, that disafforestation of a country *does* bring about a change of climate by diminishing rainfall, but before concluding, it would be well to urge, for the consideration of those who may be interested, the advisability of providing against another result of extensive clearings of forests, viz., the failure of the supply of fuel, not to speak of the timber supply for building, &c., in the future. If disafforestation does not influence the rainfall of this Settlement, it will certainly have some influence on the supply for the above-mentioned demands. The number of local steam engines on land and at sea, consuming large

quantities of firewood daily and the wants of an increasing population, will, in time, tell on the supply, and it is the incumbent duty of the present occupants, and of the Government too, to make due provision for the indispensable wants of those yet to come, by planting many of the hillsides, now entirely denuded of vegetation, with suitable forest trees *

* I cannot sufficiently express my thanks for the convenience of having access to the valuable books of reference in the Raffles Library and to the books of the Logan Library for much of the information gleaned therefrom.

TABLE I.
Available Records of Rainfall at Singapore previous to 1869.

Rainfall registered at the Singapore Observatory. From Journal of Indian Archipelago, —On the Medical Topography of Singapore.							Rainfall registered by J. D. VAUGHAN, Esq., at River Valley Road, Singapore. From the Government Gazette.					
1835	1841	1842	1843	1844	1845	Aver- age.	1862	1863	1864	1865	1866	Aver- age.
	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.
January...	18.5	3.750	22.585	18.070	10.219	5.750	8.90	10.17	6.41	6.67	5.75	7.58
February...	1.5	6.750	10.900	3.050	6.923	4.225	12.58	5.12	...	2.86	5.85	5.28
March, ...	10.8	5.009	7.220	8.045	4.150	3.030	10.92	7.10	4.83	3.99	5.56	6.48
April, ...	3.2	3.019	10.071	5.645	12.300	7.250	2.71	6.09	5.53	5.61	12.59	6.51
May, ...	5.0	6.095	9.003	9.000	7.775	5.025	4.37	5.77	2.77	3.13	9.62	5.13
June, ...	6.5	7.490	6.320	2.270	6.025	5.375	5.38	5.31	2.38	6.51	4.78	4.87
July, ...	4.6	7.228	5.098	8.500	5.890	3.395	7.45	7.85	5.64	2.62	8.63	6.44
August, ...	6.9	7.095	6.025	5.545	5.750	6.022	5.70	5.50	12.39	13.12	9.07	9.16
September,	3.6	4.220	4.250	4.055	5.075	10.250	10.51	5.20	9.49	4.00	7.17	7.27
October,...	10.8	4.070	21.005	12.145	10.200	11.844	9.36	9.50	12.66	7.86	12.60	10.40
November,	7.4	12.225	9.420	9.560	6.060	9.316	4.80	8.28	11.63	6.58	6.95	7.65
December,	20.7	6.175	4.350	6.415	8.750	6.422	16.83	10.73	13.77	9.50	8.94	10.96
Total...	99.5	73.126	116.247	92.300	89.117	89.874	99.51	86.62	87.50	72.45	92.51	87.73
Average of 4 years, 92.637 inches.							Heaviest rainfall in 24 hours,...					
							Date, {					
							7.69 14th April, 1866.					
							7.68 14th April.					
							3.98 2nd Jan.					
							2.86 24th Dec.					
							2.66 31st Mar.					
							5.60 20th Dec.					

TABLE II.
Rainfall registered from 1869 to 1880 at the Criminal Prison, Brass Basa Road, Singapore.

Months.	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	Average of 12 years.
January, ...	3.93	18.25	11.56	2.83	7.81	3.58	2.53	4.31	2.81	13.81	20.00	4.46	7.99
February, ...	3.23	7.80	7.27	8.25	10.94	2.72	6.35	2.61	7.04	6.28	8.45	7.71	6.55
March, ...	3.37	3.15	14.05	3.86	11.44	2.61	20.93	4.35	4.78	1.90	12.36	7.67	7.50
April, ...	9.23	8.81	3.33	3.97	10.90	5.70	8.70	8.52	1.80	9.83	6.65	13.37	7.57
May, ...	9.19	5.01	4.13	6.13	8.13	4.54	5.69	7.95	3.60	11.17	12.00	8.53	7.17
June, ...	6.81	11.51	5.56	5.03	5.54	5.91	8.14	13.34	13.53	4.13	9.16	5.74	7.87
July, ...	5.42	5.11	12.17	5.44	3.14	5.92	4.53	4.51	7.21	5.14	4.57	8.86	6.00
August, ...	12.31	11.36	8.51	9.27	6.55	11.82	9.41	9.84	4.78	17.36	8.42	9.10	9.89
September, ...	3.13	12.62	9.12	12.82	3.05	9.74	9.58	7.72	3.27	3.27	6.48	4.20	7.08
October, ...	5.11	9.99	14.92	6.22	8.30	8.83	9.74	12.55	1.68	6.57	14.21	8.86	8.92
November, ...	8.24	11.50	14.63	13.52	15.72	20.53	16.16	15.88	5.21	10.73	8.21	18.26	13.21
December, ...	20.66	18.13	15.19	7.98	5.68	7.55	6.72	9.90	5.48	9.76	8.02	7.40	10.21
Total annual rainfall, ... }	90.63	123.24	120.14	84.82	97.20	89.45	108.48	101.48	61.19	99.95	118.53	104.16	99.96
Greatest rainfall in 24 hrs. }	5.61	6.25	4.20	3.10	4.08	3.86	4.25	4.75	2.70	4.16	3.71	3.71	6.25
Date, {	31st Aug.	26th Dec.	8th Jan.	12th Sept.	21st May.	28th Nov.	26th Oct.	26th May.	7th June.	27th Aug.	20th Jan.	11th Nov.	28th Dec. 1870.

Greatest annual rainfall, ... 123.24 inches in 1870
Smallest do., ... 61.19 " 1877.

TABLE IV.
Table shewing the number of Rainy Days according to the Registers noted below.

	Various.						Mr. J. D. VAUGHAN'S Register.					
	1820	1821	1822	1823	1824	1825	Aver- age.	1863	1864	1865	1866	Aver- age.
January,	Details not procurable.	Details not procurable.	16	21	Details not procurable.	Details not procurable.		22	20	13	17	18
February,			17	18				16	0	10	14	10
March,			17	11				10	8	8	8	8
April,			16	15				15	11	15	13	14
May,			15	20				13	10	11	14	12
June,			20	17				11	14	14	6	11
July,			11	14				10	16	17	19	15
August,			21	17				12	14	20	16	16
September,			13	15				15	15	13	14	14
October,			22	19				21	22	17	19	20
November,			26	23				13	18	17	16	16
December,			24	18				26	19	18	12	19
Total,...	229	203	218	208	136	171	194	184	167	173	168	173
Smallest number in any year, 136 days in 1824.							Smallest number, 167 days in 1864.					
Greatest do., 229 "							Greatest do., 184 " 1863.					

TABLE IV, —Continued.
Table showing the number of Rainy Days according to the Registers noted below, —Continued.

Registered at the Criminal Prison.												
1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	Average.
12	24	19	6	18	16	9	11	4	21	24	15	13
12	21	21	20	18	10	13	7	10	13	14	13	14
8	14	22	11	18	15	22	9	9	5	15	16	14
16	17	8	13	18	12	16	11	7	13	13	15	13
16	10	14	12	14	13	16	10	10	17	15	13	13
11	17	13	16	13	10	14	17	12	8	8	12	12
13	11	19	17	11	16	9	7	13	12	10	13	13
18	17	20	14	13	15	14	11	6	16	13	15	14
12	18	20	17	11	14	12	14	2	7	11	18	13
15	17	20	19	22	12	14	16	8	11	18	14	16
21	25	20	23	23	22	18	18	12	17	16	19	20
26	18	16	18	20	17	15	15	16	21	18	16	18
180	209	212	186	199	172	172	146	109	161	175	179	175
Total...												

Smallest number in any year 109 days in 1877.
 Greatest do. 212 " 1871.

TABLE V.

Table shewing the number of Rainy Days from 1864 to 1880, as recorded by A. Knight, Esq.,
at Mount Pleasant, Thompson Road.

	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	Average.
January,...	19	14	21	15	15	15	25	24	4	16	19	11	14	7	22	28	21	17
February,...	2	12	17	19	9	12	25	21	17	19	15	14	7	20	18	17	14	15
March, ...	12	9	14	8	13	15	17	26	11	19	20	24	18	14	6	25	18	16
April, ...	11	22	17	22	22	22	18	15	16	20	21	21	15	5	22	18	16	18
May, ...	13	15	19	12	16	24	12	14	13	14	18	17	17	15	22	20	20	17
June, ...	13	15	9	15	11	14	20	18	20	13	16	13	17	18	20	15	18	15
July, ...	16	16	17	19	24	13	9	20	19	13	20	9	12	10	15	20	13	16
August,...	16	22	18	11	15	20	19	20	20	15	19	15	14	9	21	21	18	17
September,	17	13	11	18	14	15	24	21	18	7	16	13	16	7	13	13	20	15
October,...	24	20	18	25	17	15	15	18	27	18	18	23	22	8	14	27	15	19
November,	25	19	22	24	26	26	27	23	27	22	25	24	23	15	18	19	24	23
December,	24	24	11	21	26	29	21	18	19	23	20	19	25	21	24	21	20	21
Total,...	192	201	194	209	208	220	232	238	211	199	227	203	200	144	215	244	217	209

Smallest number in any year, 144 days in 1877.
Greatest do., 244 " 1879.

TABLE VI.

Table shewing the greatest Consecutive Number of Days without Rain, in each month, as observed at the Criminal Prison, from 1869 to 1880.

	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	Average.
January, ...	7	2	3	9	4	4	11	11	14	5	2	5	7
February, ...	4	2	4	4	4	7	7	11	12	5	5	7	6
March, ...	12	7	3	8	8	8	2	9	13	9	6	4	7
April, ...	...	4	13	10	3	6	4	4	7	4	7	3	5
May, ...	2	9	4	5	3	4	8	6	12	4	7	6	6
June, ...	5	6	3	4	7	8	5	4	8	13	9	5	6
July, ...	5	15	3	6	5	3	11	7	4	5	9	5	7
August, ...	3	4	2	6	10	4	7	11	17	4	3	5	6
September, ...	6	5	2	6	8	4	9	7	12	8	7	3	7
October, ...	4	6	4	4	2	4	4	7	17	14	4	6	6
November, ...	2	2	2	2	2	2	4	8	4	4	7	3	3
December, ...	1	3	8	4	3	4	10	4	5	3	4	4	4
Longest period during the year,	12	15	13	10	10	8	11	11	17	14	9	7	

TABLE VII.

Table showing the greatest Consecutive Number of Days without Rain, in each month, as observed by A. KNIGHT, Esq., from 1864 to 1880, at Mount Pleasant, Thompson Road.

	1834	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	Average
January,	6	6	2	6	6	5	3	4	13	6	3	10	10	8	4	2	5	5
February,	19	12	3	6	13	4	1	3	4	4	8	4	11	3	2	4	8	6
March,	10	8	5	23	4	9	5	1	5	8	7	2	5	8	9	2	3	7
April,	6	2	3	3	6	2	4	7	4	3	2	5	4	6	3	7	3	4
May,	4	7	4	5	5	2	8	4	6	3	5	7	3	8	2	5	3	5
June,	5	7	18	3	11	5	4	5	3	9	5	5	2	8	4	4	4	6
July,	7	5	3	6	3	7	15	3	5	4	5	10	5	4	4	5	6	6
August,	3	2	5	6	5	3	3	2	4	6	4	7	6	9	3	2	6	4
September,	3	7	5	6	9	5	2	2	11	3	4	7	7	7	6	4	4	6
October,	2	3	5	2	5	5	8	4	1	3	4	4	4	11	6	2	6	5
November,	1	2	2	2	2	2	1	3	1	3	2	1	3	4	4	2	1	2
December,	2	4	7	5	2	1	4	7	4	2	3	5	2	3	2	3	2	3
Longest period during the year, ...	19	12	18	23	13	9	15	7	13	11	9	10	11	11	9	7	8	

TABLE VIII.
Arrangement of the Rainfall registered at the Criminal Prison by Monsoons.

	North-East Monsoon.											Average of 11 years.	Remarks.
	1869.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	
November,	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.
December,		8.24	11.50	14.63	13.52	15.72	20.53	16.16	15.88	5.21	10.73	8.21	12.76
January, ..	3.93	20.66	18.13	15.19	7.98	5.68	7.55	6.72	9.90	5.48	9.76	8.02	10.46
Total 1st half of S.E. Monsoon		18.25	11.56	2.83	7.81	3.38	2.53	4.31	2.81	13.81	20.00	4.46	8.36
February,		47.15	41.19	32.65	29.31	24.98	30.61	27.19	28.59	24.50	40.49	20.69	31.58
March, ...	3.23	7.80	7.27	8.25	10.94	2.72	6.35	2.61	7.04	6.28	8.45	7.71	6.86
April, ..	3.37	3.15	14.05	3.36	11.44	2.61	20.93	4.35	4.78	1.90	12.36	7.67	7.88
Total 2nd half	9.23	8.81	3.33	3.97	10.90	5.70	8.70	8.52	1.80	9.83	6.65	13.37	7.41
Total N. E. Monsoon		19.76	24.65	15.58	33.28	11.03	35.95	15.48	13.62	18.01	27.46	28.75	22.15
		66.91	65.84	48.23	62.59	36.01	66.59	42.67	42.21	42.51	67.95	49.44	53.73

North-East Monsoon.

N. B.—The average of only 10 years is taken on—
ing to want of any record at this place for November and December, 1868. A similar table for Mr. Kington's register would have been prepared but for the large size the return would have assumed.

TABLE VIII.—Continued.

Arrangement of the Rainfall registered at the Criminal Prison by Monsoons.—Continued.

	1869.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	Aver- age of 11 years.	Remarks.
	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	inches.	
May, ...	9.19	5.01	4.13	6.13	8.13	4.54	5.69	7.95	3.60	11.17	12.00	8.53	6.99	
June, ...	6.81	11.51	5.56	5.03	5.54	5.91	8.14	13.34	13.53	4.13	9.16	5.74	7.96	
July, ...	6.42	5.11	12.17	5.44	3.14	5.92	4.53	4.51	7.21	5.14	4.57	8.86	6.06	
Total 1st half of S.W. Monsoon		21.63	21.86	16.60	16.81	16.37	18.36	25.80	24.31	20.44	25.73	23.13	21.01	
August, ...	12.31	11.36	8.51	9.27	6.55	11.82	9.41	9.84	4.78	17.36	8.42	9.10	9.68	
September,	3.13	12.62	9.12	12.82	3.05	9.74	9.58	7.72	3.27	3.27	6.18	4.20	7.43	
October, ...	5.11	9.99	14.92	6.22	8.30	8.83	9.74	12.55	1.68	6.57	14.21	8.86	9.26	
Total 2nd half		33.97	32.55	28.31	17.90	30.39	28.73	30.11	9.73	27.20	29.11	22.16	26.37	
Total S. W. Monsoon		55.60	54.41	44.91	34.71	46.76	47.09	55.91	34.07	47.64	54.84	45.29	47.38	
Total both Mon- soons ...		122.51	120.25	93.14	97.30	82.77	113.68	98.58	76.28	90.15	122.79	94.73	101.11	

South-West Monsoon.

JOURNAL
OF A VOYAGE THROUGH THE
STRAITS OF MALACCA
ON AN EXPEDITION TO THE
MOLUCCA ISLANDS
UNDER THE COMMAND OF
ADMIRAL RAINIER

WITH SOME ACCOUNT OF THOSE ISLANDS AT THE TIME OF THEIR
FALLING INTO OUR HANDS, AND LIKEWISE SUGGESTIONS RELATIVE
TO THEIR FUTURE BETTER MANAGEMENT IN CASE OF BEING
RETAINED IN OUR PERMANENT POSSESSION,

BY

CAPTAIN WALTER CAULFIELD LENNON.
PRINCIPAL ENGINEER AND SECRETARY TO THE EXPEDITION.

1796.

Madras, October 12th, 1795. I this day embarked on His Majesty's ship *Suffolk* as Principal Engineer and Secretary to the Expedition.

13th.—Seventy-eight minute guns were this day fired from the Fort and *Suffolk* on account of the death of His Highness the Nabob of Arcott, who departed this life last night.

14th.—Threatening appearances of a gathering monsoon, heavy rain with violent thunders and lightning. A royal salute was fired on account of the capture of Malacca, the intelligence of which arrived this morning.

Madras to Pulo Penang.

15th.—The Admiral having come on board this day we sailed about 5 in the afternoon in company with the *Centurion*, *Arniston*, *Indianan*, *Surprize*, galley, and *Mary*, transport.

18th.—By the chronometer and meridian observations we seem to have had a current a little to the North-East, exactly contrary to what it is natural to expect at this season.

19th.—Some signs of discontent appeared amongst the soldiers on board, on account of the difference of their victualling from the sailors, but were soon put a stop to.

22nd.—These last three days, observations confirm the opinion of a North-East current of about 14' per day. Received a copy of signals for the Military, which was communicated to the different corps.

28th.—A vast deal of ruin with short squalls and very close weather in general. One of the soldiers detected in stealing was punished by the Naval Articles of War.

29th.—Light winds and hazy weather, very extraordinary ripplings for these two days, we meet them in a line of turbulent waves at the distance of about a mile from each other, extending from North-East to South-West as far as we can see. Two large ships appeared in sight to-day standing to the Northward, which seemed to be Indiamen bound to Bengal.

November 2nd.—Carnicobar plainly in view this morning. From its bearing and distance when sights were taken for the chronometer this morning, the Longitude of that island appears to be $11^{\circ} 58'$ East of Madras Observatory, or in $92^{\circ} 19'$ East of Greenwich; Latitude, North end, $9^{\circ} 18'$.

11th.—For two days after we lost sight of the Carnicobar, we had a great set to the Southward, 80' or 90' ahead of our reckoning, by which we made Pulo Lando unexpectedly, and next day Pulo Way, with the mainland of Sumatra. From thence we found a strong current against us out of the Straits of Malacca, so much so that, though for the last four days we have been working to the Eastward, with intervals of favourable winds, we have lost in Longitude by the chronometer since the 8th. We now find a strong North-Westerly current out of the straits, very hard rain

with violent squalls attended with thunders and lightning.

13th.—Last night the *Centurion* made the signal for seeing land, on which we lay to; it proved, as we supposed to be, Pulo Pera, a small island quite bare, with good soundings all round. Last night a soldier of Captain MEURH's company died, and our sick list amounts to 78. About 3 p.m. we made Pulo Penang, but the wind falling scant, we anchored in 7 fathoms water off the North-West point.

14th.—Scarce any wind at all. We weighed anchor about 10 o'clock and with the tide crossed over the long flat shoal which lays off the North part of the island, on which we had only $4\frac{1}{2}$ fathoms water, but the bottom is soft mud, and as this happened to be low water at the lowest tides here, and the water always smooth, it can never be dangerous. Captain NEWCOME of the *Orpheus* and Captain PACKENHAM of the *Resistance* came on board and dined with us. We did not get to our anchors in the harbour until 4 o'clock. The *Swift*, sloop, with Major VIGORS, who is to command the land troops of our expedition, arrived this evening from Madras, which she left the 24th ultimo. Learned this day from the Admiral the manner of getting possession of Malacca, and the intention of annulling the present Government.

Pulo Penang.

15th.—Went ashore this day with the Admiral, who introduced me to Mr. MANNINGTON, the Chief, and other gentlemen of the Island. This day received information of the whole state of affairs at Malacca, and the chief objects of our present expedition. Dined and spent the evening with Captain GLASS.

16th.—We this day had a large party at Mr. SCOTT'S. This gentleman has lived here since the first establishment of the Island. He had formerly been a Captain in the country trade, but being unfortunate, was obliged to live chiefly amongst the Malays, on the Island Junkceylon. He has since made a handsome fortune, and very honorably discharged all his former debts. His house is built of wood in the Malay fashion upon posts raised about 5 feet from the ground. Several of the houses here are built in the same way, which, however well adapted to the situation Malays in

general are fond of, over swamps, or water, and always near it, does not appear to be the most secure or convenient for Europeans.

22nd.—Finding my time likely to be short here, I spent the last five or six days in riding about the Island to see every part of it that was accessible, but was unable to accomplish as much as I wished, from the weak state of my health. Received notice from the Admiral of his intention to proceed to Malacca on Tuesday next in the *Orpheus* with direction to hold myself in readiness to attend him.

23rd.—This morning went to see the waterfall, which is about six miles from the town, with a road for carriages for about four of the way, the rest I walked, and after climbing the latter part of it up a very steep and jungly path, at last arrived at the foot of the waterfall, and was exceedingly struck with the grandeur and magnificence it exhibited. It is above 300 feet high and falls in a broken cataract from an opening in the hill about half way up according to the view. The scenery round is true nature in its most sublime aspect, and with the expense of a little labour in clearing away some of the trees about it, would afford one of the most beautiful views possible. At present to get a sight of it you are obliged to come so near that the effect is almost lost.

I am informed by Mr. MANNINGTON that the population of Pulo Penang exceeds 20,000 souls, consisting of Chinears, Chinese, Malays, Bengallies, Portuguese, and Europeans; the first bear the greatest proportion in number and are chiefly the boatmen and fishers, and some of the richest traders are of this cast; they are originally all from the Malabar and Coromandel coasts. The artificers and most of the shop-keepers are Chinese, whose daily hire in the former capacity is very dear, being half a Spanish dollar per day. The persons who are generally employed in clearing the ground and cutting down trees for timber are Malays, who work by contract, and with their little axes with long handles, cut down or sit idle at their pleasure. Their manner of cutting differs from what is generally practised; if the lower part of the trunk of a tree be much thicker, as it for the most part is, than at the height of 6 or 8 feet, they erect a stage and cut it that height where it is least trouble, then clearing away the underwood they take advantage of the wind and cutting nearly through several trees in its direc-

tion, they fairly fell the first which in its fall brings down all the others to leeward of it. After the trees are somewhat dry, they are set fire to, but seldom that I could perceive, were entirely consumed; very large timbers still lying in the direction they chanced to fall. This and the quantity of ground lost by the stumps still remaining, if left to nature to decay, as is usually the case, impedes the cultivation for not less than six years and sometimes ten. I am, therefore, of opinion that it would be more advantageous to dig the trees at first fairly out of the ground, at least to cut all the roots that spread, and then ropes fixed to the top could easily bring down the trees by tackles attached to the bases of the adjoining trees, and when this was insufficient the aid of the axe and mamooty could soon effect it. Rice is generally cultivated after the wood is cut down, but from the ground not being effectually cleared there is full a third part of it lost, for at least six years, and the standing stumps give it the most barbarous appearance possible. The first expense and trouble is greater in the way that I conceive best, but the surface gained must more than counter-balance it; for in the present manner there is the profit of two entire years' cultivation of the whole lost in the first six years. The variety and luxuriance of the trees over this island, as over all the Malay islands, is very great, timber very plenty and good; but they have no teak, which is the best wood in India; Peon grows to an immense size, and one tree large enough for the *Suffolk's* main mast, for which I am told it was intended, now lays upon the beach.

The soil about the town itself is sandy and very disagreeable, being quite loose sand, or overgrown with a kind of long grass, the seeds of which stick in one's stockings and are very troublesome. The inland part of the island is very high, covered with wood and as yet unexplored, except a path which is cut to the signal house on the highest point of the island. The pepper plantations here flourish extremely well, and I am told that the pepper is of a better quality than at Bencoolen, which has diminished in the quantity of its produce considerably for some years past. Perhaps this circumstance may be the means of encouraging Pulo Penang, which it certainly wants very much at present, though it thrives fast notwithstanding; but there is a doubt in the minds of the inha-

bitants whether it is to be kept in the hands of the Company, from the unjust and extraordinary preference given to the Andamans by Admiral CORNWALLIS, that deters them from embarking any considerable capitals in clearing the grounds and making plantations which require several years before they can derive any material returns from. It is, therefore, imagined that it would be much more to the advantage of the Company to withdraw the establishments both of Bencoolen and Andamans and bestow their attentions on this island: as the general opinion of the Andamans proves that it never can answer the idea of Admiral CORNWALLIS, the propriety of adding the garrison and establishment there to Pulo Penang is acknowledged by every person acquainted with its situation and the circumstances attending. This addition alone would be sufficient encouragement and security to Penang. As to Bencoolen, since it is only kept up for the purpose of collecting the pepper on the West coast of Sumatra, and seeing that the quantity produced has gradually diminished for some years past, it is a question, with very little doubt, if the whole of this pepper would not just as certainly be brought to the English at Penang, where the Malays could sell it at a price, not so much above the contract price of Bencoolen, as to equal the expense of that Settlement now.

The harbour of Penang is proved to be safe and capable of holding all the ships of our Navy in the East, and affording them and any other ships every requisite assistance at all times. There is now a shipwright established, who built four ships here, and from the cheapness of timber, if encouragement was given to artificers, ships might be built cheaper here than anywhere in India, and decks for the largest ships could be formed almost by the simple excavation of the rock of Pulo Juaja* where the Chinese now manufacture chunam very cheap and good. It is, therefore, a good situation for establishing a Naval Arsenal as the most central to all the trade between India and China and all the islands to the Eastward, which there are now hopes may be carried to an extent much beyond what it has been hitherto, and this in all probability could be done without any, or at most a very trifling, expense to the Company; since if they would only avow their encouragement and support of the Settlement, in the manner before-mentioned, its being continued a free port would secure it such a resource of

* Jerkajah or Jerjah.

shipping and trade as would tempt the speculation of individuals to these undertakings. The watering of ships at Penang at present is by no means convenient, but might easily be made so, at a much less expense than has been proposed by some schemers, whose plan I have heard of, but who don't seem to understand the subject; though perhaps it may some day happen that, being proposed by some person with interest, it may become an expensive job to the Company without much advantage to the public.

The Fort is situated in the North-East point of the island, which I think the best, but it is in itself so childish a plan and scale, so near the sea, so ill-executed, and so crowded on by the town and houses adjoining, that I fancy, to afford a real security to their possessions, it will be found necessary to build another in a different place. I am told the best place for the purpose is about six miles South, near where the Chinese have their pepper gardens, and where there is an inner harbour, which might, as far as I can judge, from the plan of it, be improved to the reception of large ships. The tree or plant which yields that curious substance, the elastic gum, grows here in abundance; its juice, when cut or broken, resembles milk, which, when suffered to remain exposed to the air, coagulates into the substance we see it without any chemical process whatever. Bullocks and sheep are very scarce and poor here; the beef is generally buffalo, chiefly from the opposite shore of Queda, and sheep come from Bengal. Poultry are plenty and cheap; the market being supplied by Malay fowls, besides what are bred on the island, which are every day increasing; vegetables are cultivated in great plenty by the Chinese, who, wherever they settle, are industrious and orderly. I am told that there are at present for sale in Queda, twenty very fine elephants, which might be bought and embarked for 500 Spanish dollars each, which would be worth from 1,000 to 1,500 or even 2,000 Pagodas each on the coast of Coromandel, this breed of elephants being much more esteemed than any in India. Having received orders from the Admiral for the embarkation of the troops, communicated the same to Major Vigers.

Pulo Penang to Malacca.

24th.—This morning embarked with the Admiral on board the *Orpheus*, weighed anchor at 10 o'clock, and sailed through the

southern passage, in which we had rather more water than on the flat to the Northward, but the channel is more intricate, though perfectly safe with a leading wind.

25th.—Fell in with four China ships bound for Bengal and Bombay. By one of the latter we sent despatches to be landed at Anjango. We steered South after clearing the shoal, which extends to near Saddle Island, and the 26th made Pulo Jarra. We then steered South-East, and the next day, 27th, made the Sambelans or Nino Islands. Two more China ships passed us. 28th, very light airs, but fine weather; this evening made the Aroas, and anchored for the night.

29th.—Steering due East from the Aroas, we sailed with a fine breeze through the Sand Heads to Parcelar Hill, from whence the course to Malacca, South-East is without danger, Point Rachardo, half way, being a very safe mark. All these islands and points are like so many mile-stones or guide posts for this little voyage.

Malacca.

30th.—Our wind very faint and the tide against us for a great part of this day; we did not anchor in Malacca road until 5 o'clock in the evening. Immediately went on shore with the despatches from the Admiral intimating his intention to dissolve the Dutch Government.

December 1st.—Went on board this morning to attend the Admiral, as Mr. COUPERUS told me last night that the Council intended sending a deputation this day on board to compliment His Excellency. Shortly after, two members of the Dutch Council and an Interpreter came on board, when the business proved a mere compliment of congratulation on his arrival and nothing more.

The Admiral soon after went on shore, and was received by the Governor, Mr. COUPERUS, Major BROWN and all the Officers of the Garrison. He was conducted to the Government House, whence after a short stay we went to the house inhabited by Major BROWN. Some other houses the Admiral looked at, but they all appeared too hot and confined, and at last he resolved on going into Captain NEWCOMB'S house on North-West side of the town just outside the Tranquera bridge, Mr. COUPERUS never once having offered the

Government House, though the only one proper for his residence. We dined this day with Mr. COUPERUS; there was a large company, and not a bad dinner, allowing for Dutch cooking, of which I have not the most delicate idea. Madam COUPERUS was dressed in the most unbecoming manner possible, a mixture between the Malay and Portuguese, her outward garment being made exactly like a shift, she looked as if she reversed the order of her dress altogether. Her hair was drawn so tight to the crown of her head, and the skin of her forehead so stretched, that she could scarce wink her eyelids; she seemed however very affable and well bred for a person never out of Malacca. In the evening she played on the harp, a plain instrument without pedals and only capable of a natural key, made at Batavia; she was accompanied by some of her slaves on violins; and altogether made very good music for a Dutchman to sleep to; she chewed betel incessantly, as did the other ladies in company, and every chair in the room was furnished with a cuspidor to spit in, for while the ladies chewed and played, the Dutchmen smoked their long pipes and drank Klein beer, which is some of the best malt liquor I ever tasted. We were attended at dinner and during the evening by Malay slaves, male and female, some of the latter rather pretty, considering the general cast of Malay features. COUPERUS, I am told, has above 130 slaves, which must be a vast expense to him, and he never sells one.

December 2d.—The declaration to dissolve the Dutch Government, which is to be made in Council, was this day prepared.

3rd.—After a conference of considerable length between the Admiral and Major BROWN, the latter was taken ill, and therefore no decision took place respecting the declaration. The Convoy arrived this day from Penang; Major VIGORS and most of the Officers landed.

4th.—The Admiral, finding Major BROWN unable to attend business this day, convened the Dutch Council and dissolved the Government as it stood since our possessing the place, having entered the declaration as a minute in their proceedings. Captain NEWCOME was in the ridiculous predicament of sitting as a Member during the dissolution of the Government, though the mode of forming it was partly a measure of his own; however, I believe he concurred much more heartily in its dissolution than establishment,

as he honestly confesses himself to have been overruled contrary to the suggestions of his own judgment. The troops this day landed from the different ships. The Admiral was somewhat embarrassed to draw a line between Majors Vigors and Brown, but upon the former, though Senior Officer, agreeing that the Civil Government should be vested in Major Brown, as supposed to have most information and experience on that subject, reserving to himself the command of the Troops, that medium was accordingly adopted.

8th.—For some days past was extremely ill, but was this day able to visit the works of the Fort and Town, which I found in better order and more capable of defence than I could suppose from the facility with which it was gained by so small a force. Had the Dutch been true to their trust and assembled the garrisons of Rhio and Perak, as they were ordered from Batavia to do, they certainly might have occasioned us a deal of trouble.

9th.—Visited Bocoen* China and was much surprised at the attempt to fortify such an extensive line as is here intended and partly executed, and which the whole garrison is not more than equal to defend, in case of an attack; and it seemed to me that this work might have been laid out, to much more advantage and effect, in the Fort and round the Town.

11th.—The *Spy*, schooner, arrived this day from Manila, measured a base line for the survey of Malacca.

13th.—These two days chiefly employed in surveying the Fort and environs. After restless enquiry concerning the strength and situation of the different islands to the Eastward, learned that there were four Natives of Amboina on board a small brig commanded by a French Officer, in search of whom I sent my chief Malay Interpreter, who procured two of them for me.

14th.—The arrangement for the further expedition Eastward having been made, and given to the Admiral for his consideration and approval, he referred it to Major Brown, who made several alterations in it, particularly relative to the Grenadier Companies, two of which he insisted on reserving, as part of his garrison of Malacca: certainly the best men should soonest be employed where service was actually going forward, instead of being reserved for a remote chance of service in garrison.

16th.—After much enquiry and considerable expense, I had this

* Bukit, the Malay for Hill.

day the pleasure to obtain very satisfactory information relative to the situation, strength and disposition of the Natives of Amboina, from which I have great hopes the task of reducing it, if necessary, will not prove very arduous.

The arrangement being somewhat out of the regular line of roster, has occasioned a good deal of discontent and representations from the officers left behind, but has not caused any change in the orders.

17th.—By an English ship arrived from China, we learn that there were no French ships at Batavia on the 1st of November, as three Portuguese ships left it on that date and arrived at Macao December 3rd. These Portuguese may account for the white flags that we have frequent reports of as French in that quarter.

19th.—The *Suffolk*, *Centurion* and *Hobart* arrived this morning from Pulo Penang. By them we learn the news of an action in the Mediterranean, in which we were decidedly victorious; that a successful descent has been made on the coast of France; that the Bill for Relief of the Army in India was at last before Parliament; and several other pieces of intelligence.

21st.—The *Arcton*, Indiaman, was this day despatched on her voyage to China.

25th.—Chiefly engaged in completing the survey of Malacca. The Prize Agents employed in taking accounts of all the public effects, Major Brown having resigned the Government of Malacca, and Major Vigers having preferred going on the expedition, Captain PARR, next in seniority, was put in orders for the Government of Malacca. Lieutenant HERTLAND was also ordered for the expedition.

30th.—As it appeared to the Admiral that we were scarce in tonnage, the *Armenia*, Captain SAXES, of 300 tons, was this day taken up at four Pagodas a ton per month for six weeks certain.

31st.—Several of the seamen being in a very sickly state were sent on shore under the charge of Doctor HARRIS's Assistant here, as being unfit for immediate service, but as there was a great want of wholesome accommodation for them, I made, by the Admiral's order, a plan of a temporary hospital for the sick of the Navy, the execution of which I left to Lieutenant FARQUHAR. Notwithstanding that his town is surrounded on the land side with impenetrable jungles

and swamps, from the small proportion of sick in Hospital, it may be reckoned healthy for Europeans, though, since our possession of it, the rains have been very constant. This is probably owing to the effect of putrid vegetation being washed away as soon as formed.

Though situated in the most favourable way for uniting all the resources of a rich country with an easy communication by sea to foreign markets, Malacca now labours under every inconvenience that an island does, without its advantages, and though it has adjoining a soil capable of yielding the richest productions of every kind, and though under the dominion of an European power for about 250 years, it remains, even to the foot of the lines of the town, as wild and uncultivated as if there had never been a settlement formed here; and except by the small river that passes between the fort and town, you cannot penetrate into the country in any direction, above a few miles; nor is even this extent general, being confined to the roads that run along the sea shore about two miles each way, and one that goes inland. Mr. COUPERUS has a country house about four miles on this latter road; and there were, some time ago, gambier gardens, about seven miles inland, to which this road led, but it is not at present cleared farther than Mr. COUPERUS's house. There is no cultivation at present round Malacca but the gardens of the Chinese, and a few of the Malays, who supply the town with great abundance of vegetables and fruits, the varieties of which are reckoned at upwards of 100, few of which are indebted, however, to cultivation, being mostly the spontaneous productions of Nature. The gardens immediately next the town are so choked up with cocoanut trees that even from Bocca China you can hardly see a house; they grow indeed so thick as very much to obstruct the free circulation of the air, and almost entirely to keep off the land wind, which at this season is the prevailing one, and very cool and pleasant. This extraordinary want of cultivation, I am informed, is the consequence of the restrictive policy of the Dutch Government of Batavia, who make a point of discouraging it, in all their Settlements, the more effectually to render them dependant on Java, where alone they promote cultivation and improvement, and from whence they supply all the other Settlements, even with the common necessities of life. Sugar might be cultivated here to great advantage, the cli-

mate being very favourable to its growth, but no more is grown than is used as a common vegetable, the manufacture of that article having been hitherto prohibited. Salt too might, with very little attention and care, be made in quantity, on the swamps quite close to the town, but Mr. COUPERUS says they are not salt enough for the purpose; the truth of which I can scarce credit, as they are subject to be overflowed by the tides, and have no fresh water to communicate with them. There was, some years ago, a very good manufacture of gambier here, which exported nearly 40,000 pikuls annually; but about 9 years ago, in the war with the Malays, the gardens were cut down, and the manufacture destroyed. Since then there is but a very small quantity made here, and Rhie is now the chief place where it is manufactured. Gambier is a substance of a waxy consistence, and a light yellowish brown colour, formed by the decoction of the leaves of the shrub into which a small quantity of rice flour is thrown, to make it more firm and solid. It is of an acrid bitter taste, and is eaten with betel by all the Malays; it leaves an agreeable sweetness on the palate. I am told it only differs from a similar substance made use of on the coast of Ceromandel in the same way, imported from Pegue, called Cotchundy, by the admixture of the rice flour, which renders it of a better consistence and more easily packed and transported, and less liable to run in hot weather. This article was the only manufacture in Malacca, that I can learn, and with canes, dammar, betelnuts, and gold dust from Mennt Ophir, about 26 miles inland, constituted the only natural exports; and now that the gardens have been destroyed, and the manufacture transferred to Rhie, and that canes are grown quite out of demand, the remaining articles are all the Settlement furnishes at present for exportation, and it is dependent on foreign markets even for the common necessities of life. The exclusive trade which the Dutch carried on, and the breach of which they punished with death, was in tin, pepper, opium, Japan copper, and spices; the two first articles they bought from the Malays at their own prices, having either established factories for melting the tin and collecting the pepper, as at Rhie, Perak, Palembang, or forced them to sell wherever they could find them; the other three articles they sold to them. Their open trade consists in salt, piece goods of India, Macassar cloths, tor-

toise shells, ivory wax and gold dust. About four years ago when the Commissioners from Holland found the trade of Malacca so much on the decline, they reduced the Civil and Military Establishments of it considerably; the diminution of the trade, I understand, in a great degree is owing to the vicinity of Penang, where the Malays, finding a free sale for all their goods, naturally carry them whenever they can escape the vigilance of the Dutch; and no doubt of it the prosperity of Penang is considerably indebted to the monopoly of Malacca. How far it may be affected hereafter by this monopoly being put an end to, it is hard to say: certainly Malacca is better situated for trade, particularly that carried on by the Malays in their prows; and it is the key of the straits, since no ship can pass but in the sight of it, and I have little doubt but it will soon recover its former consequence, when the freedom of trade shall take effect, and the Dutch influence is known to be at an end. It is probable that there will be found advantages and trade sufficient to support both this and Penang. This it is certainly necessary to keep, to prevent any other power establishing themselves in it, and it is likely the Americans would avail themselves of the circumstances of its being evacuated in a short time, which might be attended with very inconvenient effects to us hereafter; and as to Penang it possesses natural advantages enough to ensure its prosperity, unless thrown off and disclaimed as unworthy the protection of the Company; and amongst its advantages, I cannot help thinking its harbour for ships, and resources for ship-building not the least, particularly as it is not at all improbable but the chief business done in that line may soon find its way from Batavia thither, which indeed is sincerely to be wished, on the score of humanity, that baneful climate having so often proved fatal to those whom either choice or necessity led thither, for repairing their ships; and as there is a possibility of our soon becoming masters of that place, it might be worth attention to endeavour to establish the artificers in the ship-building line, at Penang, which I have already remarked is well calculated for a Naval Arsenal. We should then have resources on both sides of India, and ships meeting with accident on one side of the Peninsula, need not go to the other for repair. The trade of ships too is very much increased in these Straits, within a few years back, which is attended with the good effect of discouraging the propen-

sity to piracy, so common among the Malays; and here, having mentioned this propensity for piracy, it may not be improper to remark, that it would be a most meritorious work to put a stop to it, should we have an opportunity, by gaining possession of all the Dutch Settlements to the Eastward: which might in some time be effected by a couple of frigates stationed in the Straits of Malacca and Sunda or Bally, and four or five sloops of war or armed brigs of a small draft of water, and made for sailing into the creeks where the prows of the pirates generally rendezvous. The sloops to have ranges allotted to them, and then publishing, in all the islands and chief towns of the Malays, Badjoes, and Buggesses, that the English are determined to destroy the towns where or under whose jurisdiction piracies are committed, and all prows armed beyond a certain scale. After a few examples should have been made, nations the most savage would soon cease practices so ruinous to their interest. This undertaking, which would add dignity and respect to the English flag, and promote the cause of humanity, and social intercourse with nations now unacquainted with such sentiments, might, I should hope, be accomplished at no very considerable expense, as a certain duty of tonnage might be well afforded, by all ships trading to the Eastward, for that security to their lives and properties, which they are now under the necessity of guarding, each separately, at a very great additional expense of men and guns, exclusive of the constant apprehensions under which they carry on all their connections with those islands; besides which, as the intercourse of trade would by this means very much increase, an inconceivably greater field would open for the sale of British manufactures of all kinds; for the safety of trade once established, the prices paid for European articles by those nations would fall to that just rate, which would enable them to purchase infinitely *greater quantities* with more certain advantage to us than we now derive from extraordinary profits attended with great risks.

Abundance and great variety of timber fit for ship-building is to be got both here and at Penang. Masts of the largest size are got very cheap from the opposite side at Syac,* and are sent annually to Batavia. It was for the purpose of carrying a cargo now ready here, that the *Constantia*, an old Indiaman, was sent here. A

* Siak.

74-gun ship's mast may be bought for two hundred dollars.

The population of Malacca does not exceed 14,000 or 15,000, which is calculated from the quantity of rice imported, and may be tolerably exact; they consist of Malays, Chinese, Chulears and Europeans; and as there is nothing bearing any resemblance to a Raja or Supreme Head among them from the interior part of the country, each caste has its own Chief or Captain as he is called, who are all subordinate to the Government.

The disposition of the Malays about Malacca is quite inoffensive, nor has there been any act of treachery, that I could learn, committed by them for a considerable time past. In their domestic habits they are free from the prejudices of the Hindoos, and are reckoned Mahomedans, though I fancy their chief tenet is abstaining from swine's flesh. They are extremely indolent, and, if not tempted by the hope of gain, would never exert themselves. Though very muscular in their make, and better formed for strength and activity than any of the Natives of India, they are passionately addicted to gaming and cock-fighting, which are their chief amusements. Creese-fighting is the principal public exhibition I could observe, in which the combatants pride themselves, not in the boldness of attack, and manly agility, but in the wily approach of a tiger, where their greatest merit lies in getting unawares behind their antagonist, and surprising him by a stab in the back; and this circumstance I look upon as strongly indicative of the general disposition of the Malays.

The Chinese are equally addicted to gaming with the Malays, and have here and at Penang licensed houses where they play with dice, a kind of hazard that seems to have a good deal more variety than ours. They are also fond of theatrical exhibitions in which their merit is considerable; their chief performers are carpenters and other artificers, and I doubt not if people of the same rank in life, in a distant country town in England, were to attempt getting up a play, they could hardly outdo the exhibition of the sort we saw at Penang, on a stage erected for the purpose in the streets. The spectators sat on chairs and benches in the open air and were refreshed with tea and sweetmeats; their music is certainly very disagreeable, being composed of gongs and very harsh hautboys. They are very industrious, almost all of them keep little shops

and sell groceries of all sorts. They all hitherto sold arrack, and the consequent drunkenness of the place was abominable. I am happy to observe now, however, that by the new regulations with respect to the duties, this article is put under limitation, and taxed as it should be. The Chinese, when they arrive at a certain age, always prepare their coffins, as a memorandum of the end they must sooner or later necessarily arrive at, and a stimulus to the observance of morality during life; and certainly they are in general a very orderly well-behaved people. At every man's door you accordingly see four or five immensely thick planks of which their coffins are to be made. Their burying ground they always choose on a hill, and that called Bocca China derives its name from being chiefly devoted to that purpose. Their tombs are of a particular construction, being surrounded by a considerable space open on one side and semicircular on the other; some of them formed at a great expense. They always enclose with the dead body, a certain quantity of provision, and sometimes money. From their industry and ingenuity they are very useful to new settlements, and deserve to be delivered from those oppressive impositions which the Admiral has very wisely put an end to. They are great breeders of hogs, and are generally the persons who slaughter them; but why the privilege of doing so should become a subject of taxation as in the Dutch Government, and still continued, more than beef, I don't understand; unless it be that they have a particular method of increasing the weight of the pork by introducing water into all its pores, similar to the cheat butchers at home sometimes practise of blowing up meat to make it look well, but still more effectual. They kill beef too, which is very coarse and bad, being all buffalo. There are bullocks and cows here, but very scarce and poor, and the milk and butter, both here and at Penang, are very bad; the cause is the same in both places; the soil not being sufficiently cleared, the natural grass in the swamps and jungles is too coarse for bullocks, but is the best for buffaloes, which here grow to a great size and strength, and when taken are very fierce. For the same reason sheep cannot thrive, there is therefore no mutton but from Bengal.

Almost all the mountains in the Peninsula of Malacca as well as those on Sumatra are impregnated more or less with gold, and

many of them go by the name of Mount Ophir; that inland from this place is about twenty-six miles, the communication to it being from the river that disembogues near Point Sisa. The Malays who go there are under no restraint, nor pay any duty, but enclose with stakes a certain extent of ground where they think convenient, work until they procure the quantity they want, and then return to dispose of it. I am informed the richest gold mine in the world is the black mountain in Cochin-China, the working of which having been interrupted by civil wars for four years together sometime back, the price of gold dust in China rose twenty-five per cent. higher than its general rate, and upon its being again opened, gold dust, throughout that immense empire, fell to its former standard.

Concerning the works of the fort of the town of Malacca, according to the plan they are built upon, they are in tolerably good repair, and capable of considerable defence; though should it remain eventually in our possession, which is not unlikely, and a strong garrison be established in it, I think it would be absolutely necessary to modernize the whole river face of the fort, and enlarge the two adjoining bastions; to open the streets of the town to the enfilading fire of the fort; to deepen the ditch and complete the lines round the town; to erect an outwork before the salient angle next the sea, to open a communication with Bocca China, and to erect two small regular redoubts thereon connected by a strong stockade well scarped on the outside, and lastly to clear the ground at least the distance of four hundred yards, for an esplanade. A magazine for powder is indispensably necessary, no secure building for that purpose having hitherto existed. The severity which the Dutch have constantly exercised in this Government has impressed itself so forcibly on the minds of the inhabitants of all denominations, that they can hardly conceive the English to be now their rulers, from the mildness of our administration and the politeness we show to the Dutch, which is attended with the ill effect of their influence being still so great as to keep back every kind of information and assistance that we might naturally expect; it therefore becomes the more necessary to adopt decisive measures, and the Admiral has accordingly resolved to send away the late Governor and Dutch soldiers who have hitherto been kept in contradiction to the orders

from Madras. However, as there has been a sort of interregnum with regard to the Administration of Justice, it was judged necessary to continue in office the Members of the former Court of Judicature, which some of them seemed not ever willing to comply with, until they were given to understand, that the alternative was being sent to Madras; accordingly a commission of justice was made out and issued. The Fiscal is the Acting Member upon all occasions of small import, and in the Dutch Government, his fees always bore proportion to the rigour of the punishment. This stimulus to cruelty neither the general disposition of the Dutch, nor the particular temper of Mr. KUDÉ required, and it was but a short time before our arrival that a young woman with child was whipped so unmercifully that she died in a short time. They sometimes proportion the punishment to the time of smoking their pipes; and it is not uncommon to say give him one or two pipes, according to the magnitude of the offence; meaning that the criminal is to be flogged during the time that the phlegmatic Fiscal smokes one or two pipes of tobacco.

The investigation of the public accounts and revenue has been a source of great trouble, and until the determination to send away Mr. CORREARS and the Dutch soldiers was understood, every possible difficulty was thrown in the way. It now appears that several things were omitted in the statement of public property first sent. The account of the salaries and emoluments of the Dutch servants seem to be loaded with a great many more charges than is natural to conceive would be allowed; but there seems to have been a great deal of peculation in practice, particularly in one article, the share of 25 per cent. on the revenue, that was allowed to the Civil Servants; the consequence of which was, that the Government tempted the Chinese farmers of the revenue, to bid a vast deal more than they were really worth, from the first fruits of which their share were regularly paid; but the balance was more than could be collected; and they were therefore obliged to write to Batavia for a remission of it altogether, which I am informed was never refused. After the resignation of Major BROWN, the Admiral found himself freed from the promise he had made to continue the monopoly, and therefore the public sale of the revenue, some days ago advertised for this day, is on the principle

of a trade open to all, upon certain fixed duties, which perhaps may be more profitable in the end, than the monopoly.

January 3rd, 1796.—The order issued some days ago for the embarkation of the troops, was necessarily changed on the Admiral resolving to leave behind the *Centurion*, for the defence of the Straits and Settlement of Malacca, as we have lately heard frequent reports of the French and Dutch Cruizers being out. From this and the great increase of stores and baggage, all the ships are very much crowded.

4th.—Mr. COUPERUS having had orders to prepare himself to go to Madras on this day on board the *Swallow*, as he had a large family, and vessel of his own, which has hitherto passed for a brig belonging to the King of Cochin, commanded by a French officer, he requested permission to proceed in her; and having reported himself ready and obtained his passport from the Admiral, he embarked accordingly.

From Malacca Eastward.

5th.—The troops and stores being all on board the respective ships, instructions were drawn out for the guidance of Captain PARR, on which he was directed to build a temporary hospital. The sick of the Dutch soldiers were placed under the care of Dr. HARRIS'S Assistant, and the Pioneers left at Malacca and public artificers put under charge of Lieutenant FARQUHAR, also the work on Becca China ordered to be discontinued.

6th.—Embarked this morning with the Admiral, being now provided with such interpreters and guides as I could procure.

Sailed from the Road of Malacca about 12 o'clock, having closed the despatches for Madras per *Swallow*, passed the Water Islands with a light air, but the tide towards night making against us we brought to near Mount Formosa.

7th.—Weighed anchor this morning, the wind rather against us, but with the aid of the tide we passed Pulo Pisang and anchored near Pulo Cocup in sight of the Carrimons. The 8th, taking advantage of the tides, for the winds were by no means favorable, we got on to near One-tree Island, when we anchored. This is a very dangerous shoal and reef, extending full three miles in nearly an

East and West direction, and, at high water, only a few of the rocks above water, and a single tree from which it derives its name. The 9th, though the winds were still contrary, we worked on with the tides, and passed Red Island on the right and Barn Island and the Rabbit and Coney on the left, and several other nameless islands besides. The working of the different ships through these narrow channels was extremely beautiful, the islands being clothed with the richest luxuriance. The *Surprize* got a turtle from a prow that came off one of the islands. We passed the island St. John's and anchored for the night in sight of Point Romania. The *Suffolk's* launch, the *Mary* and *Armonia* were very far astern on the 10th, though the wind was tolerably fair; the Transports were so far astern that it was one o'clock before we could get under weigh. We then made sail, but were soon after again obliged to come to near Point Romania. These straits are by no means well laid down, as it is impossible to know the different islands and headlands from any chart of them yet published. It certainly would be a very desirable circumstance, to have a complete regular survey of them, as from the number of different islands, channels might be discovered, that would favour the passage of ships in either direction, and with any winds, as I am informed there is a deep water and good anchorage through almost all of them, but from want of knowledge of them, ships being afraid of exploring new passages, loose a vast deal of time. The tides here are very irregular, but in general, in North-East monsoons, are observed to flow eighteen hours and ebb six. The flood on the Eastern side of the strait, I am told, is from the Eastward, and I am told these circumstances are reversed in the opposite monsoon. It is certainly a subject well worth observation to examine into the effects of the tides in these straits, which must be liable to great variations in different parts, from the multiplicity of islands and channels, and should become an essential part of the duty of any person appointed to survey them.

Straits of Singapore.

11th.—A sail in sight to the Southward, which proved, as was supposed, to be the *Transfer*, Captain ELMORE. We stood on with the tide, but not being able to weather Pedra Branca, were obliged

to return and again anchor under Point Romania; the *Transfer* also joined us.

12th.—Captain NEWCOME came on board this morning, and brought us a fine turtle; he also gave us the intelligence, from the Mate of the *Transfer*, who was on shore at Rhio, that on the 7th instant a prow arrived there from Banca, the Noqueda* or Malay Commander of which reported to the Sultan of Rhio, that there were on the Straits of Banca three French and two Dutch Ships-of-war (copal praon,† in the Malay tongue); and that the Sultan advised him not to proceed by that passage on that account. The Mate, who came on board, thinks the report well founded, as the forfeiture of his life, he says, would be the consequence to the Noqueda, of false information. The Admiral on this resolved to return as far as the little Carimon Island, and send into Malacca for the *Centurion*; and, after giving the requisite warning to the Settlement of Malacca, to proceed by the Straits of Durion and Banca, in order, if possible, to intercept this force, which may be an armament destined either for the recovery of Malacca, or to distress our trade in these Straits; and there is some reason to suspect Mr. COUPERUS may have given intelligence to Batavia of the exact situation of the garrison of Malacca, and likewise of the probable time of our departure. For upon further enquiry, it appears that he had some idea of a force on these Straits, as he warned Captain SANDS of the *Armenia*, with whom he had some connection in trade, immediately on his arrival at Malacca, and before he was taken up as a Transport, to avoid the Straits of Banca, knowing or suspecting danger there. Captain NEWCOME dined with us to-day, and mentions that the soldiers on board the *Orpheus* are very discontented, on account of the difference of provisions with which they are served from that of the sailors. On long voyages like the present, when the services of men are to be immediately called for, and every exertion expected from them, there should certainly be more attention and liberality shewn to their provisions, on which their health so materially depends. They are denied the little gratifications of flour, peas, sugar, &c., and only served biscuits and salt beef, 1lb of each per day to each man; the consequent sickness, or at least weakness, of the men, after a voyage of six weeks, must surely be a much greater

* Nakhoda.

† Kapal prang.

loss to the public service than those little allowances; which would not only gratify their pride as well as palate, but keep up that efficient vigour necessary on their arrival at their destined scene of action, for supposing only five in a hundred to suffer by the saving, exclusive of the idea of humanity, that of economy will make it evidently appear that it is cheaper to employ one hundred stout healthy well fed men, than one hundred and five supported on this curtailed allowance, five of whom are sure to become unserviceable thereby.

Off Carimon Island.

13th.—As if the winds were determined to oppose us, the moment yesterday we resolved on returning, it chopped about, and was still against us, so that our progress back promises to be as tedious as when coming.

14th.—Having come to an anchor off the little Carimon island, the Admiral despatched the *Hobart* and prow to Malacca, with orders for the *Centurion* and *Swift* to join us. I wrote to Captain PARR an account of the information which caused our return, and the Admiral's intention to proceed by the Straits of Banca, to clear it of any enemy that may be there.

15th.—A large ship appeared coming from the Eastward, which proved to be the *Phenix*, Captain HAY, from Manila, the same that was sometime ago guilty of piracy not far from hence, in having plundered and burned a Dutch snow and plundered a vessel under Arab colours. The Admiral sent for him, but as he shewed rather an inclination to prosecute his voyage, the *Resistance* was sent in chase.

16th.—The Seapoys and pioneers were landed at a very good watering place on the great Carimon Island, to refresh themselves, while the Transports were well washed and cleaned, which, from being so crowded, could not be done while they were on board, and was therefore necessary to their health and comfort. We also changed our place and anchored near to the watering place.

17th.—This day joined us from Malacca, the *Centurion*, *Hobart* and *Swift*. They inform us of the loss of the *Shah-Munshy* of Bombay, from China, on the rocks of Pedra Branca on the 8th instant; the

crew were all saved in their boats, but the ship went to pieces immediately, and nothing but their lives saved; the boats must have passed us in the night of the ninth. The loss of this fine ship is the consequence of the want of proper survey of these straits, with proper remarks on the tides and currents. From the *Phoenix* we this day learn by our boat which returned from her, that there are two Spanish Frigates at Manila, both sickly, bound shortly to Spain by way of Cape Horn. That the forces of Manila are considerably increased, and great pains taken in their discipline. That the fort is put into a very respectable state of defence, the works being new modelled and repaired. The present Governor is reckoned an active clever man, who encourages cultivation and trade. Some specimens of a white rope made of grass, and some of the material itself prepared for twisting, were brought us, which seem to be very strong, but I understand decays in fresh water. They make a very good sort of canvass of it. I am inclined to think that if the long grass, which grows on the beds of all the great rivers on the coast, was properly prepared, it is the same, or at least would be equivalent to it, in strength and durability, as it possesses a remarkably strong fibre, very fine and silky. We also got a small supply of chocolate and biscuits from the *Phoenix*. This day a duel was fought between Ensign DEACON, of the 17th Battalion, and Captain TURNBULL of the *Mary*, Transport.

[The Straits Branch of the Royal Asiatic Society is indebted to Mr. W. E. MAXWELL for the above interesting paper. Mr. MAXWELL found it when looking through some papers at the India Office Library, and copied that part of Captain LENNON's Journal which describes the passage of the Expedition through the Straits of Malacca.—ED.]

A SKETCH OF THE CAREER
OF THE LATE
JAMES RICHARDSON LOGAN,
OF PENANG AND SINGAPORE.
BY
J. TURNBULL THOMSON.

In perusing the first number of your publication, I observe the high terms in which my friend the late JAMES RICHARDSON LOGAN is noticed by your Vice-President, the Ven'ble Archdeacon HOSE, M.A. This induces me to forward to you a few reminiscences of him, for, coming from one who knew him from boyhood, and who had the privilege of being his intimate friend for many years when residing in the Straits, what I have to relate, I venture to anticipate, will be of some interest to your readers.

He was the son of Mr. THOMAS LOGAN, of Berrywell, Berwickshire, Scotland, who had married his cousin, also a LOGAN, and to his mother my friend bore a strong resemblance. His superior intellectual faculties were also inherited from this source, hers being of a high order. His parents belonged to a family which, in their country, were and are eminent as agriculturists, but at the time I first knew him, Mr. THOMAS LOGAN had retired from business.

I met the subject of this notice as a boy when he was attending the Academy of Dunse, conducted by the late Mr. THOMAS MAULE. He was there what was called an extra scholar, sitting with others at a table in the centre of the school apart from the ordinary classical benches. At the table at which J. R. LOGAN sat, he and others were brought forward in the several branches of education by special teaching. From this Academy many men of note have emanated; amongst those that I can call to memory are the late Professor CUNNINGHAM of Edinburgh, Captain BAIRD SMITH of Bengal, and Dr. ROBERT HOGG of London.

J. R. LOGAN was some three years older than myself; hence, during the years 1830, 31 and 32, when we sat in the same school-room as boys, we arrived at no close intimacy. But the course of events brought us together in another part of the globe, by different routes and dissimilar adventure, it is true, yet the year 1839 found us as guests of the late amiable and kind-hearted proprietor of Glugor, Penang, and Longformacus, Berwickshire—the late DAVID WARDLAW BROWN, Esquire. Here a friendship and mutual confidence was established, that flagged not till death.

After leaving Dunse Academy, J. R. LOGAN proceeded to Edinburgh as pupil to a cousin of the same name, by profession an Advocate or Barrister. After fulfilling his time, he proceeded to Bengal, at the invitation of another cousin named DANIEL LOGAN, of whom he used always to speak with the highest regard, where he was engaged in indigo-planting for a short time, after which he accepted the invitation of his friend and schoolfellow, the late Mr. FORBES SCOTT BROWN, to join him at Penang. Here he soon found an opening in his profession by the departure for Europe, of a Mr. BELLETCHET, Solicitor, who practised in the Penang Courts.

But an obstacle in the way of his entering the Bar suddenly and unexpectedly presented itself in the shape of a most extraordinary freak on the part of the political rulers, who were at that time officials of the Hon'ble East India Company. The then Governor, Mr. BONHAM, and his coadjutors, taking advantage of the absence of the Judge, Sir WILLIAM NORRIS, abolished the Bar with three objects in view. First, retrenchment; secondly, an addition to their power; and thirdly, a saving of trouble to themselves. On these three grounds the young Advocate was refused admission. But so well was he supported, and so highly were his abilities appreciated by the inhabitants of the Settlement—European and Native—that the authorities had to give way, and thenceforward he became a Member of the Straits Bar.

In our frequent intercourse at Penang, I early observed his habits of close application and enquiry, the first instance of which was his sitting down beside a -Kling shop at Sungei Kluang and obtaining from the owner, not only a list of all the various native products sold, but an account of their uses. places of growth,

prices, &c. In preparing himself also for the practice of English law (he having been trained in Scotland), I did not fail to notice with astonishment the intense continued application he gave to the contents of huge tomes, which, to me, were as "dry as dust" and as indigestible as sand.

During my residence at Penang, which continued for over three years—in 1838 to 1841—he was a frequent visitor to my solitary bungalow situated in the interior. His company was never more charming than on such occasions. Making but few friends in society, and being of a particularly retiring disposition, he seemed to reserve an overfull share of his attractions for those that could heartily sympathise with him in old fellowship. I remember particularly one occasion when I asked him to join me in an expedition to the interior of Sabrang Prye. Exploring the sources of the Junjong Idup, probably now covered with cultivation, but, at that time, under primitive forests, waste and unoccupied, except by the tiger or the *jakun*, we were detained for three days by a constant downpour and flooded rivers, having taken refuge in a deserted *pondoh*. Here his versatile talent came to our aid in wiling away the long, dark, dreary hours, whose melancholy and tediousness was enlanced by the wail of the *unkn*. I never heard Shakespeare read with greater effect, vigour, or thorough appreciation.

Even in those his very young years, I found him a safe counsellor and adviser in matters important to myself, where a false step might have been irretrievable. In my heart I was thankful to him for this. We met again at Singapore in 1843-4, where his elder brother ABRAHAM had joined me in my own house as *chum*. A falling off in practice at Penang made a change advisable for the younger LOGAN also, and with us he took up his residence.

For several years, the busy practice of his profession seemed to engage his whole attention, but early in 1847 I had an indication of coming events; not that there had not been abundant indications before this, for while he conducted the *Gazette* at Penang he drew out originality and latent talent from many of the residents—European and Asiatic—which that paper had never shown before, and he himself illuminated it with many powerful leaders.

The occasion of this direct indication occurred when he had preceded me to Malacca on law business. I had followed in the gun-

boat on survey duty. Here it was difficult to find quarters, so he carried me to Kampong Illier, where he had hired a bungalow. In the evening he invited me to accompany him to St. John's mount, where, he said, we should enjoy a most glorious sunset. While sitting on the old Dutch ramparts his first hint of a scientific journal was made to me, by his asking my co-operation—not that he seriously intended this, but as an indirect way of letting me know of a somewhat (as it would appear to me) ambitious project. At the time, I personally thought little more of it, but of his seriousness (if I had any doubts on the subject) he gave ample proof in his devotion of every spare moment to an examination of the geology of Malacca and its neighbourhood, exposing himself in this pursuit the live long day to the full rays of the tropical sun. Few men were gifted with such intense energy. Alas! the spirit was strong, but a delicate constitution denied to him the full exercise of his abilities.

The establishment of the "Journal of the Indian Archipelago and Eastern Asia" duly took place in 1847, as mentioned by Archdeacon HOSE, who remarks that it was a bold enterprise for a single individual to undertake. I may also add that, continued as it was for so many years, it was also a most public spirited one, for such a work was necessarily mainly supported at the private expense of the proprietor. And as the Archdeacon justly states, the continuance of the Journal evidenced a time of great scientific power and literary activity in the Straits. To LOGAN is the credit due not only of evoking this power, but of having personally contributed so largely by his papers to its scientific objects.

If my remembrance serves me aright, LOGAN, while influencing all that were willing to aid, himself engaged first in geological enquiry; next in geographical exploration; and then in philological studies: and, to my mind, it is on the latter that his reputation will mainly rest.

During these few recent years, I have given some of my attention to one of the branches coming under the scope of his studies, and in reading the disquisitions of HODGSON on Asia, BLACK on Africa, ANDREWS on Polynesia, with others, I find his elucidation of many remote and subtle points in the linguistic peculiarities of nations most respectfully quoted or referred to. Indeed, he is generally known as Dr. LOGAN—a title too often detained from those who

deserve it best. On this subject, it is now many years ago that I had the pleasure of the company of Sir WILLIAM MARTIN, Chief Justice of New Zealand, when I was surprised to learn of the familiar knowledge which that learned lawyer had of the minute Analysis by LOGAN of the Polynesian languages.

LOGAN, in first applying himself to the geology of the Malayan Peninsula, displayed great fortitude and contempt of danger, proceeding as he did in his excursions in a small *sampau* into coves and creeks notoriously infested with pirates. But even more so did he display these admirable qualities when penetrating the wilds of Johor, Pahang and Kedah. About this period he had removed to Sungei Kallang, near Singapore, while I, bound by my official duty, remained in town.

I remember, after he had been on one of those expeditions for several weeks, I was suddenly aroused late in the evening by what appeared to be his spectre. The next moment I saw him tottering, when I rushed forward and grasped my friend, leading him to a chair.

He had just returned from exploring the Iudan, Johor, and Muar, crossing the jungles of the interior, and after many adventures amongst the wild tribes and escapes from flooded rivers, alligators, &c., he found means to return to Singapore. Weak, weary and sick, he made his way to my house, as the nearest one, likely to administer to his immediate wants. In this, I need not say there was no laxity.

In the latter years of our intercourse, I observed him to be principally devoted to philology. On this subject, his range of enquiry was as wide as it was persevering. I finally left the Far East in 1855, before he had entered into the midst of his labours in this direction; yet I had had fair opportunity of seeing his close application to the science of language. All languages were equally attacked by him—European, Asian, African, American, and Polynesian—in their glottal, phonetic and idiomatic phases, and particularly the latter. The extent of the learning evidenced by his papers is surprising, even now after the lapse of a quarter of a century, if we consider that they were published before the present facilities were offered or at hand to the student, which are now so abundantly provided by the publication of the vocabularies and grammars of HODGSON, KOELLE, BLACK, CAMPBELL, and a host of others.

I may mention one incident which occurred at this period as exemplifying his devotion to his favourite pursuit. In the year 1849-50, I was surveying the Johor River, when I asked him to accompany me for change of air. I had at my service a small gunboat not over well provided with *kadjangs*. Anchoring in the evening, I turned in after the fatigues of the day and fell asleep, but was awoko at midnight by a sudden turmoil. This proved to be a *Sumatra*, bringing with it the usual squalls and rain. On looking for my friend, I found him perched on the top of the powder cannister to save himself from the wet, close by a lamp at which he was, and had been all night, closely analysing the construction of the Dutch language. Such enthusiasm surely deserved unalloyed success and the applause of mankind. But the inscrutable ways of Providence brought not about the reward that his friends would have entirely desired, or which would have been entirely gratifying, to them. *Sic transit gloria mundi!* LOGAN is variously and at different times mentioned along with MARSDEN, LEYDEN, RAFFLES, and CRAWFORD. For my part, I would class him alone with LEYDEN. But in doing so, even here there is considerable qualification. Both were borderers, both men of intense energy and great powers of application. With all this LEYDEN was a poet, a poet above mediocrity. I am not aware that LOGAN ever wrote a verse. It is in the science of language that LEYDEN and LOGAN are akin in genius, but LEYDEN's sphere was translation, LOGAN's analysis and comparison. LEYDEN was an antiquarian, LOGAN an explorer of things as they are, a far more difficult and deeper subject than the former, requiring great and comprehensive knowledge, a highly matured judgment, and close acuteness of critical powers.

Fate was adverse to both; neither brought their labours to full consummation. Under happier circumstances, both would have illuminated the world with best stores of yet dormant mysteries, wherein the complex skein of human races on this earth would have been disentangled and brought within our ken. While I mention LEYDEN and LOGAN as being men of much the same genius and power, it would be neglectful not to denote their differences. LEYDEN was born of the humbler classes, LOGAN of the middle. This is only interesting in so far as it points a moral and illustrates life's antithesis. In India, JOHN LEYDEN, the shepherd's son, was the pri-

vileged companion and favoured protégé of the most illustrious men in power, by whose interest and support he had unstinted facilities given him in his special and peculiar pursuits. LOGAN, the son of a gentleman, had none of this. What he attained was due solely to his own labour and indomitable perseverance; these being exercised at the same time under the distracting influences of a laborious profession by which he honourably maintained himself.

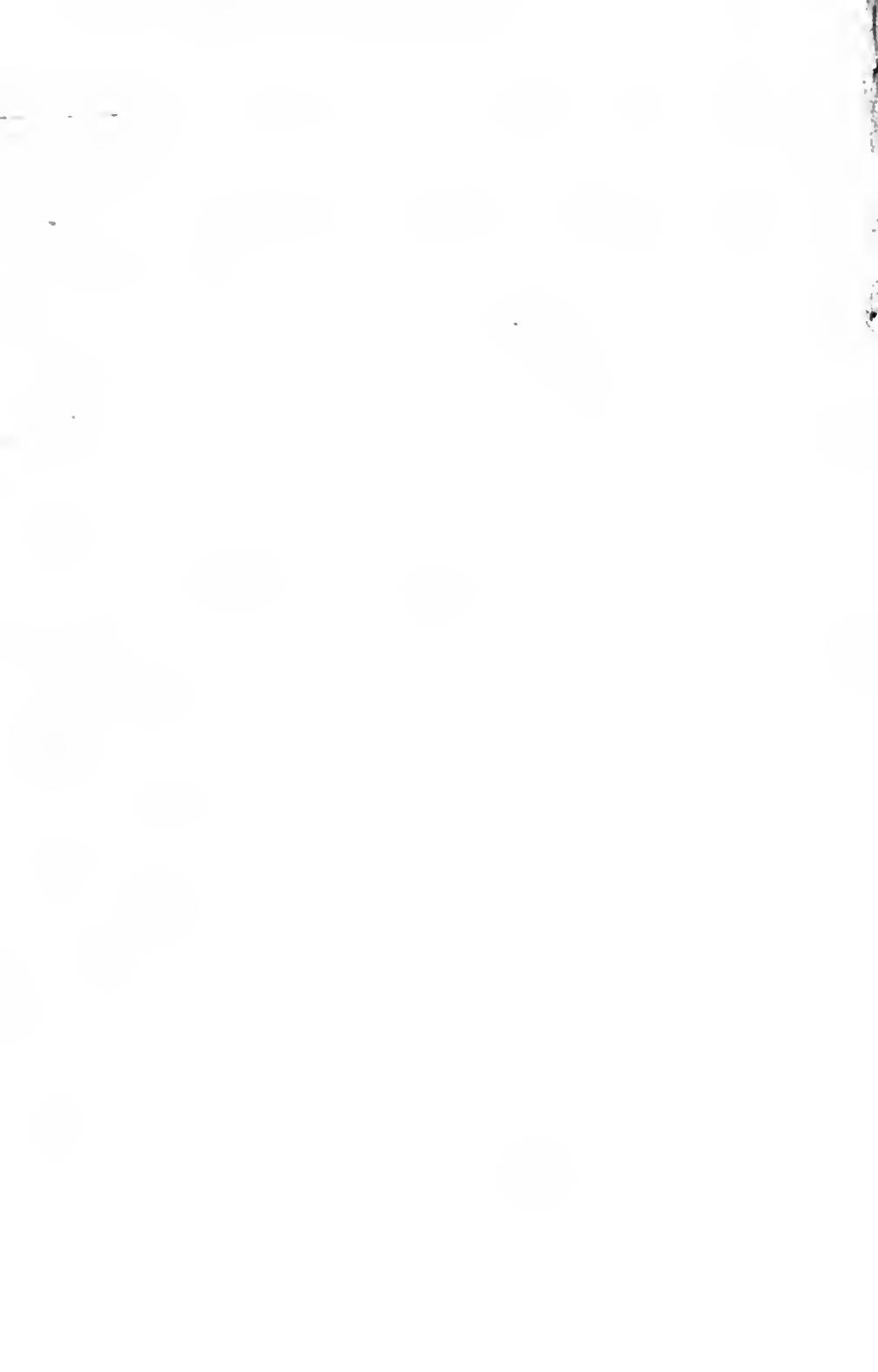
Under these circumstances, probably LEYDEN would have accomplished more; indeed he must have done so, but an early death overtook him, as we all know, caused by exposure to the malaria of Batavia.

What LEYDEN accomplished, therefore, was small as compared with LOGAN. In the science of races and languages, LOGAN's grasp was almost universal, enabling him to collate the lexicons, vocabularies and grammars of nations and tribes in the most distant parts of the globe, and elucidate their systems and constructions. Of this vast enquiry, LEYDEN may be said to have had time only to approach the portal.

But, as I have suggested before, LOGAN's work was also incomplete. Ten years of learned leisure in his native country would have enabled him to work wonders. But this was not vouchsafed to him. Borne down by weak health, far from his native land, he was taken from us at the age when man's intellect is in its full vigour. And we live to lament unfulfilled hopes, disappointed aspirations, and useful labour ceased, to be no more.

INTERCARGILL, NEW ZEALAND,
20th May, 1881.





MEMORANDUM
ON
THE VARIOUS TRIBES INHABITING
PENANG AND PROVINCE WELLESLEY
BY THE LATE
J. R. LOGAN.

[On the 30th November, 1880, the late Mr. DAVID AITKEN wrote to the Government stating that the late Mr. JAMES RICHARDSON LOGAN had written, for the Government, a paper on the Wild Tribes of Penang and Province Wellesley, which Mr. AITKEN believed would be found in the records of the Lieutenant-Governor's Office, Penang.

A search was made, and the paper was found. It has never before been published, and, coming from the pen of such an authority as Mr. J. R. LOGAN, will be read with great interest.—ED.]

THE native races of the Malay Peninsula are the Simang, the Binua, the Malay, and the Siamese.

Simang.

The Simang are scattered in small disconnected herds throughout the forests of the broadest part of the Peninsula, comprising the Malay States of Kedah, Pêrak and Tringganu. They are the sole aborigines of Kedah, including Province Wellesley, in the vicinity of which some families continued to wander until the increasing denseness of the Malay, Samsam, and Chinese popula-

tion, and the felling of the forests, drove them further inland. At present the nearest groups are those on the river Krian, above the British boundary.

The Simang are a variety of the Papuan branch of the oldest race of India, Ultra-India, and the Indo-Pacific Islands, the other branch being the Dravido-Australian.

The Papuans are distinguished from the lower Dravirian tribes and castes, and from the Australians, more by the spiral growth of the hair than by any other constant physical characters. From the second great race of this ethnographical province—the Himalaic—both branches are well differentiated by the non-Mongolic shape of the head and by the comparative slenderness of the trunk and limbs, and darkness of the skin. The most striking and general peculiarity of the head is the pyramidal form of the nose, caused by the root sinking deeply in below, or forming an acute angle with the base of the prominent brow ridge.

In the Simang, the head is small, the forehead low, rounded, narrow and projecting over the root of the nose; the corona ridged or obtusely wedge-shaped; the occiput rounded and somewhat swelling; the lower part of the face oval or ovoid; the cheek bones broad, but not remarkably prominent, except with reference to the narrow forehead; the upper jaw not prognathous; the nose short and somewhat sharp at the point and often turned up, also spreading; the mouth large, but lips not thick; the projecting brow nearly on the same vertical line with the nose, mouth and chin; hair spiral and tufted; the beard of much stronger growth than with the Himalaic race; the eyes fine, middle-sized and straight; the iris large, black and piercing; the conjunctivo membrane yellow; the person slender; the belly protuberant; the skin fine and soft, varying in colour from yellowish brown and dark-brown to black; average height about four feet eight inches.

The Papuan race exhibits great variety throughout its range from the Andamans to the Viti-Archipelago, New Caledonia and Tasmania. Some tribes are more Australoid than others; some are more Mongolic, especially where there has been intermixture with the Himalaic race; and some approach the more debased and prognathous varieties of the African Negro, but, as a whole, the race is much more akin to the Dravirian (where the latter has not been

improved by Iranian crossing), and to the East African, than to the Himalaic. While the Australian branch, protected from the Malayo Polynesian by the character of the Southern Continent, preserves a distinct form of language, which connects it with Dravidian. No example has yet been brought to light of a Papuan tongue possessing distinct pronouns and a distinct structure from the Malayo-Polynesian or Himalayan. Some of the vocabularies contain many upper Asiatic words not found in Malayo-Polynesian dialects. The Simang dialects, while containing a large number of Malayo-Polynesian vocables, are more Himalaic than the Malayo-Polynesian glossaries. The pronouns have the peculiar forms that were current in the dialects of that branch of the Himalaic people which predominated in the Gangetic basin and its confines before the Arians advanced into it, and which spread its language and civilization eastward till they prevailed from Guzerat to Tonquin. These pronouns and many other common vocables are still used by the Kol or Sonthal tribes on the Ganges, the Kyi or Kusia in the Brahmaputra basin, the Palaong and the Mon or Peguans on the Irawadi, the Kambojans on the Mekong, and the Anamese on the Tonquin. The Simang and some of the Binua tribes appear to have obtained them at the time when the Mon-Kambojan nation was established on the Irawadi, the Menam and the Mekong, before the Burmans rose into power, and long before the Shans or Siamese advanced westward into Assam and southward down the Menam, separating the Mons from the Kambojans. That a Mon Colony continued to flourish on the Munda down to a period long subsequent to the intrusion of the Arians into India, is evidenced by the rock inscriptions in characters similar to the ancient Mon, which are found in Province Wellesley and on Bukit Mariani.

The Simang are about the least civilised of the tribes of the Indian Archipelago. They wander in the forest, preying on wild animals, which they kill with spears, arrows and darts from the blow pipes; their only clothing, a piece of bark round the middle; and their temporary hairs only protected from the weather by a few branches or leaves hang over two or three sticks.

Binua.

These tribes, Himalaic in race, are scattered over the Southern

half of the Peninsula, from Johor to Pêrak, none being found in Kedah.

The variations in the physical characters are considerable, but these are more closely allied to the Malayan than to the finer Indonesian. In a common form of the head, it is somewhat prognathous, the zygomata have much lateral development, the forehead is very narrow, and the eye also is more oblique than in the Malay. In some respects this type resembles that of the Kol and some of the cognate Gangetic and Ultra-Indian tribes, more than that of the Malays. But examples are also found of approaches to the finer Indonesian forms. The person is shorter than with the Malays. The trunk is very long in proportion to the limbs, which are lighter and handsomer than with the Malays. The dialects are Malay, but all the vocabularies that have been collected preserve a variable proportion of non-Malay words. Many of these are Mon-Anam, and the Pêrak tribes and several of the Southern Binuas still use the Kol and Simang first pronoun. The remaining non-Malay vocables are mostly Sumatran, but some have remoter Indonesian affinities. The civilization of the Binua is of the ruder Ultra-Indian and Malay kind. Where they have least intercourse with the Malays, the dress of the men is still a strip of bark passed between the legs and fastened at the waist, and that of the women a piece of bark beaten out and wrapped round them from the waist to the knees. Where there is regular traffic with the Malays, the dress of the latter has been adopted by the males, but the cloth sarong of the females retains the scanty dimensions of the original bark petticoat. The huts are ruder than those of the Malays. Their agriculture is confined to the migratory system that prevails among all the ruder Himalaic tribes, and much of their food is derived from fishing, snaring and hunting, no sorts of flesh being rejected.

The Binua appear to have spread over the Peninsula in pre-Malayan ages, extirpating the Simang in the narrower Southern portion. During the Mon-Kambojan era, that people would occupy towards them the same relation that the Malays now occupy. The language of the Mons and Kambojans would become the *lingua franca* of the districts around their Colonies and of the rivers on both sides of the Peninsula which their praus frequented for barter

with the natives, and it would ultimately, in a large measure, displace the older dialects of the latter. When, at a comparatively modern period, the Malays from Sumatra colonised the Peninsula, their language became everywhere current, and the older dialects are fast perishing before it.

The Malays (Malayu.)

The Javanese preceded the Malays as the first dominant maritime people in the later age of Indonesian civilization, and founded Settlements in the Peninsula as well as in Sumatra. But in the era immediately prior to that of European supremacy, the Malays of Monangkabau, extending their conquests to the sea on both sides of Sumatra, became the leading and most enterprising naval people of the Archipelago. They planted Settlements of their own, or formed quarters on almost every island and on every navigable river.

The Peninsula, as far North as Tennasserim, passed into their hands, Malacca becoming the leading maritime State in the Eastern seas.

There has been considerable intermixture of blood between the Malays and the Binuas of the interior with the various foreigners who settled in their ports—Chinese, Southern Indians (Klings chiefly), Arabs, Portuguese, Burmese, Peguans, Japanese, as well as with Javanese, Bugis, Achinese, Dayaks, and other Eastern Islanders. Besides the normal variety of characters observable in every race, the maritime Malays have been further modified by this intermixture. The most common type of the least improved Malay is one of the coarsest of the Archipelago. It resembles the Siamese more than the sea-board Burman, shewing a similar flatness and expansion both of the crown and the back of the head, the meeting of the two planes being more angular than convex. When viewed in front, it bulges out laterally beyond the forehead. The nose is low and the lips thick. The lower part of the face is sometimes prognathous. The person is broad and squat, the trunk long, the limbs short and thick. The Malay varies from this lowest type coarse Mongolian with a Negro tendency to the finest form which the Turanian skull can assume without ceasing to be Turanian. The head becomes nearly oval, the occiput rounded, the

nose palder, and the eye brighter, straight and more liquid. The Malay is good-natured, courteous, sociable, gregarious and gossiping, finding unfailing amusement in very small talk, jokes and pleasantries. To superiors, he is extremely deferential, but with no taint of the abject or fawning Asiatics of higher civilization. His intellect has little power of abstraction, and delights in a minute acquaintance with the common things around him, a character that reflects itself in his language, which is as rich in distinctions and details in the nomenclature of material objects and actions as it is poor in all that relates to the operations of the mind. He is slow and sluggish, and impatient of continuous labour of mind or body. He is greedy, and, when his interests are involved, his promises and professions are not to be trusted. His habitual courtesy and reticence and the influence of his religion mask the sway of passions to which he may be secretly yielding and under which he sometimes becomes rapacious, treacherous and revengeful. It has become customary to protest against the dark colours in which the earlier European voyagers painted him, but their error was less in what they wrote than in what they left unwritten. Under bad native Governments, leading a wandering life at sea, or on thinly peopled borders of rivers—the only highways in land covered with forest and swamp—trusting to his kris and spear for self-defence, holding in traditional respect the powers of the pirate and robber, and putting little value on life, the Malay became proverbial for feline treachery and bloodthirstiness. Under the Government to which Malays have been subjected in Province Wellesley, and which has certainly not erred on the side of paternal interference, for it has left them as free as English yeomen, they now form a community as settled, contented, peaceable and free from serious crime as any to be found in British India—a result due to the clearing of forests, the formation of roads, the establishment of a regular Police, and the honest administration of the law.

The Malay treats his children with great affection and an indolent indulgence. Women are not secluded, and the freedom which they enjoy in their paternal homes is little abridged in after-life. Early marriage is customary and necessary, for if it were long postponed after puberty, they would not be restrained by their religion from the license which the habits of the non-Mahomedan nations

of the same race permit to unmarried girls. In the Malay States the law sanctions slavery and subjects the person of the female slave to the power of her master.* In this Settlement, the Malay finds compensation for the deprivation of this right in that of divorce, and the extent which it is availed of renders marriage in practice little more than the legalisation of temporary concubinage. The independence allowed to women, and the manner in which their parents and other relatives usually take their part, enable them to purchase their divorce, or worry their husbands into granting it, whenever they wish to change them.

Siamese.

The Siamese do not differ much from the Malays in their physical characters. The person has much the same height and form. The remarkable flatness of the back of the head is more generally present, the profile is also more vertical, the nose is more often slightly arched, the mouth smaller and firmer. The chief peculiarities are the lowness of the hairy scalp and the staring expression of the eye, caused by the retraction of the upper eyelid.

The Siamese belong to that branch of the Himalaic race which preceded the Tibeto-Burman on this side of the Himalayas. At a very remote period in the history of this branch, the progenitors of the Lau migrated to what afterwards became the Chinese province of Yun-nan, and thus became, in a large degree, isolated from the influence of the sister tribes who spread over the Gangetic basin and Ultra-India, while the Mons and Kambojans became the great maritime nations from the Irawadi to the Mekong, and the Anamese occupied the borders of the China Sea as far North as Tonquin. The Lau retained their sequestered inland position until the Chinese pushed their conquests and settlements into Yun-nan, when between the 7th and 8th centuries hordes of the Lau re-entered the basin of the Irawadi, established themselves at Moung-Goung and gradually subjected and partially occupied Assam. Thus in the 7th and 8th centuries, and subsequently in A.D. 1224, when

* But if the master avails himself of his power, in the case of a debt-slave, he does it at the sacrifice of the debt.—Ep.

they founded the Assam rule, a large part of Manipar and the territory now known as the Shan States, their language and civilization had been considerably modified by the influence of the Chinese. It was not till many centuries later that they succeeded in expelling the Kambojans from the lower basin of the Menam and reaching the sea. From Siam they spread down the Peninsula, and all the Malay States appear to have successively been forced or persuaded to acknowledge their suzerainty. At the end of last century, the inhabitants of the territory between Siam and Kedah were almost purely Siamese. In 1821, they expelled the Malay Chiefs and the greater part of the Malay population from Kedah and occupied that country until about 1842, when it was restored to its Native rulers, but as a dependency on Siam. The Southern progress of the race led to parties of Siamese settling in various parts of Kedah and in the N.E. districts of Province Wellesley, in which, Siamese was till lately, and is still to a considerable extent, the current language of the oldest settlers, being Samsam, *i.e.*, Islamised descendants of Siamese with some intermixture of Malay blood.

The Siamese language is radically Himalaic, but owing chiefly, it is probable, to the influence of Chinese, it has been transformed, like some of its sister tongues, from a dissyllabic to a monosyllabic structure. Remnants of the Himalaic prefixes are found in the initial consonants of several words. The forms of the common Himalaic vocables are often broader and more consonantal in Siamese and the sister Mon-Anam languages than in the Tibeto-Burman, and they retain a similar Archaic character in many of the Malayo-Polynesian vocabularies.

These brief notes will be rendered more intelligible by a reference to the general history of the linguistic family to which the languages of the Papuans, the Binua, the Malays, and the Siamese alike belong.

The Archaic-Himalayo-Polynesian formation was related to the Scythic on the one side and the Chinese on the other. It possessed a system of minutely differentiated formatives and pronouns and

a tendency to harmonic agglutination and dissyllableism like the Archaic Scythic and proto-Scythic tongues. Its present representatives may be divided into three branches. The first to separate from the Tibetan or Himalayan mother stem was the Malayo-Polynesian. In the great Asiatic Archipelago it has preserved more of the Archaic structure than the continental branches, and has developed the original phonetic tendencies until it has become highly harmonic, and, in one of its leading and most influential varieties, very vocalic. The next branch that left the Himalayan cradle was the East Tibetan or Mon-Anam. It retains the direct collocation and many of the Archaic forms of the common roots that are found in Malayo-Polynesian. The third branch was the West Tibetan or Tibeto-Burman, to which the present Tibetan and sub-Himalayan, with many of the Ultra-Indian dialects, including Burman, belong. Its distinctive trait is an inverse collocation which may be safely attributed to its immemorial contact with the dialects of the Scythic hordes, who have, from time to time, intruded into Tibet. Both of the continental branches are very impoverished forms of the Archaic-Himalayo-Polynesian. They are distinguished from the insular branch by the decay and in many of them the loss of the ancient phonology. From the influence of the conterminous and intrusive Chinese, or at least from a tendency which is common to them with it, they now partake in various degrees of the crude monosyllabic and tonic phonology which characterises that language. The dialects that have had the longest and closest contact with Chinese, *e.g.*, the Anam and Siamese of the Mon-Anam branch, the Burmese and Karin of the Tibeto-Burman, are now monosyllabic and present so great a contrast to the harmonic languages of the islands, that it is not surprising that Dr. PRITCHARD and other ethnologists have classed them with the Chinese. On the other hand, many of the Gangetic dialects that have not been exposed to contact with Chinese, or with their eastern sisters since their transformation, retain harmonic and agglutinative traits, similar to those that are found with a much more free and powerful development in the Oceanic tongues.

The foreign races found in the Straits Settlements are very numerous, but to describe them, however briefly, would be to enter on

the ethnology of a large portion of Asia and Europe. Chinese from Kuantung and Hok-kien furnish a large portion of our population, and Chinese from other provinces are found either among the general population, or at the Roman Catholic Mission College. Annamese, Kambojans, Burmese and natives of various parts of India, Persia, Arabia, Eastern Africa and Europe represent Continental ethnography, while, in addition to the Malays--Achinese, Battas, Javanese and Bugis represent the Oceanic. In Singapore, Dayaks, natives of the Moluccas and other eastern islanders, are also to be found. There has also been more or less admixture of blood among all these races, with various results. The most distinct classes thus produced are the Portuguese of Malacca, who, from the non-renewal of European blood are now more Malay than Portuguese; the native Chinese of Penang and Malacca, who from constant intermarriage with fresh immigrants from China, have nearly lost all trace of their Malay ancestry on the female side; and the so-called Jawi Pakan, a class between the Kling and the Malay which retains its distinctive characters by a continued intermixture with both races of its progenitors.


THE ENDAU AND ITS TRIBUTARIES.

BY

D. F. A. HERVEY.

[The valuable geographical knowledge obtained by Mr. HERVEY in this journey is shown in the trace of the Endau River and its tributaries as laid down in the new map of the Malay Peninsula published last year under the auspices of this Society.—EDITOR.]

1st January, 1882.]

N August, 1879, being obliged to seek relaxation from work, I determined to try and clear up the point suggested by LOGAN's account of the two rivers Sēm-brong,⁽¹⁾ which he supposed to be one and the same stream connecting the Endau, and the Batu Pahat⁽²⁾—flowing respectively into the China Sea and into the Malacca Straits—and thus giving a navigable passage between the two seas. I had also in view the object of collecting such remnants as might still be obtainable of the *Jakun* dialects of Johor, more particularly that of a small tribe on the Mādek, one of the tributaries of the Endau, which I had been assured by the Dāto' of the Lēnggin⁽³⁾ *Jakuns* (on my trip to Blūmut, early in 1879) differed from that of all the other *Jakun* tribes in Johor.

(¹) See p.p. 101 and 103, *Journal of the Straits Branch of the Royal Asiatic Society*, No. 3, July, 1879.

(²) "Batu Pahat," the howu rock. A chisel and other instruments are said to have been found by some Malays digging in the neighbourhood many years ago. This particular chiselling has been attributed to the Siamese. There is also a tradition that it was here the Portuguese got their stone for the Malacca Fort, but I believe it was obtained much nearer Malacca.

(³) I could not obtain any clue to the origin of this name from either Malays or *Jakuns*; but it may be well to draw attention to the Siamese word "Khlang Kian," which is asserted in the "Sējārah Malāyu" to have been the origin of the name of a portion of the Johor country. I believe there is a place in Pāhang bearing a very similar, if not identically the same, name.

On the night of the 13th August, I left Singapore in a *yébéng*, lent me by Ungku MĒJID, brother of the Mahārāja, with CHE MĒSA, an Official of the Moar River, who was familiar with the Endau, and a motley crew of eight Malays, comprising natives of Johor, Pahang, Trěnggānu and Kělantau. The Pahang men, as is natural, approximate most nearly in speech to the Johor dialect, but I noticed differences such as "sungal" for "sungei," &c. The Trěnggānu men have a sharp, narrow accent, and a way of shortening off their words at the end, such as "sampa" for "sampei;" they have also a nasal ending as "tūain" ("ain" as in French "lūin") for "tūan." The Johor men were constantly laughing at the others for their outlandish accent, but, as they said, what else could be expected from *urang barat*—those western folk. ⁽¹⁾

About 3 P.M. on the 16th, or about 3½ days after leaving Singapore, we reached the mouth of the Endau, and at 11 A.M. on the 17th, we were alongside the steps of the CHE MA ALI's Police Station, which is conveniently situated on a point of land between the converging streams Endau and Sěmbrong.

After consultation with CHE MA ALI, I decided to ascend the Sěmbrong first, and make for its source, this being the trip which would absorb the greater portion of my time. I found it necessary to give up the idea of going to Gūnong Bānang on the Bātu Pahat River, in order to make time for a visit to the Mādek *Jakuns* on my return from Hulu Sěmbrong. The account given of Gūnong Jāning, which was ascended by MACLAY, made me wish very much to attempt the ascent. I was told that ladders had to be constructed to enable them to scale the rocks in some places; that the rocks were very fine, and plants flourished there which were not to be found in other parts of the jungle; while the view from the top was well worth seeing. In that neighbourhood too, on Sungei Mās, resided the Rāja Běnhāk, he having removed a year or two before from the Mādek, and a visit to him would probably afford the best opportu-

(1) This may, at first sight, seem a rather strange expression, but a glance at the map will show that, though we may be accustomed to think of these countries as lying to the North and perhaps a little East of us, they really lie to the West of Singapore, or, what is the same thing, Johor Bĥaru. The same misconception is sometimes found to prevail regarding the relative positions of Liverpool and Edinburgh.

nity of rescuing from oblivion a good deal of interesting information about his branch of the *Jakun* tribe. I may take this opportunity of correcting an erroneous statement I made in my account of a trip to Blâmut,⁽¹⁾ that Gûnong Jâning was in Pahang territory; it lies in Jehor territory on the right bank of the Upper Endau.

As the Malays required a day or two to prepare a good-sized *jalo*r for the ascent of the Sêmbrong, I occupied the 18th with a visit to a hill called Tânah Abang,⁽²⁾ a mile or two below the station, with the object of getting compass-bearings from the top. The first part of the way took us through alternate hillocks and hollows of a black springy soil. This turned out, however, to be the wrong path, and we went back up the river a bit, and landed this time on the right track, coming, shortly after landing, upon old tin-workings, but I could detect no trace of tin in the granite and sand: there were a few plantain trees—relics of human cultivation; a little further off there were, I was told, other tin-workings, which had been undertaken by a Singapore man, and were satisfactory, but had to be abandoned for want of funds. We found here a very pretty small plant with white-striped leaves growing by the roots of a tree; it is edible, having a pleasant acid flavour like the sorrel leaf, and is used by the natives with the areca nut when they cannot get the betel leaf: it is called *dann chârû*. We reached the top of the hill in an hour or so, but I was obliged to give up the idea of taking bearings, the hill being very steep, and its sides being covered with big trees near enough the summit to block up the view in all directions in spite of several of the smaller ones being cut down.

One of our party said that he knew of a spot which had been mentioned by some *ôrang hulû*, i.e., *Jakuns*, where they had lit a fire on a hill-side in the jungle to cook their food, using some black rocks, which they found there, to support their rice-pot, and the man added that, after their meal, they noticed that some of the rock had melted and was trickling down in a dark shining stream.

The next day, accordingly, I got my informant to shew me the spot, which proved to be on the side of Bûkit Langkap, a short way

(¹) Journal of the Straits Branch of the Royal Asiatic Society, No. 3, July, 1879.

(²) "Tânah Abang," red earth.

up the river beyond the station; I found some weather-worn and honeycombed rocks cropping up from the surface; I broke off some pieces with my hammer and chisel with much difficulty, the rock being exceedingly hard, and from this, and its colour and weight, I took it to be oxide of iron of good quality. Whether this would have melted under the degree of heat to which it was probably subjected may be doubtful. This hill appeared to me to be merely a southern continuation of the Tanah Abang ridge. Its name derives from a tree—*Langkap*.⁽¹⁾

The next day, 20th, we started in a *jaler*—*CHE Mŭsa*, *CHE Yŭsur*, myself and five paddlers—for *Hŭlu Sĕmborong*. About noon we observed a large black monkey, about the size of a medium *bĕruk* (the cocoanut monkey) up in a tree; he had a long tail and very white teeth; he was making loud, guttural noises, and was evidently under the influence of some emotion; the men said a tiger was near, which caused him to give vent to his alarm in this way; they called him *cheng kok*.

21st. Early this morning saw a red-headed snake, about four feet long, go into the water; no one could name it. River very winding so far.

22nd. The river being very narrow, winding and rapid, we started with poles to-day, and made much better progress. So far, I calculate, we have made at the rate of twelve to fourteen miles a day. To-day snags and shallows are troublesome, to say nothing of being constantly on the look-out for the *ŭnak* (long thorny trailers) of the rattan. About 11.30 got into a fine, straight bit of the river, where we put on a spurt. The foliage on the banks was beautiful, being charmingly diversified with the feathery fronds of the rattan; the river continued wide for about a couple of hours, and later became too deep for the poles once or twice. We stopped for the night near the junction of the *Sĕngkar* with the *Sĕmborong*, but the *Sĕngkar*, though boasting a name of its own, seems to be but a *trŭsan* of the *Sĕmborong*. A Malay trader with *Jakans* passed just before 6 p.m., saying they would reach *Kumbang* about 8 p.m., a contrast to the leisurely progression of a Malay crew, with which I had to be contented.

23rd. To-day, for the first two hours, the course was very nar-

(1) The "genggong," a sort of native jew's harp is made by the aborigines of this wood.



Fig. 1

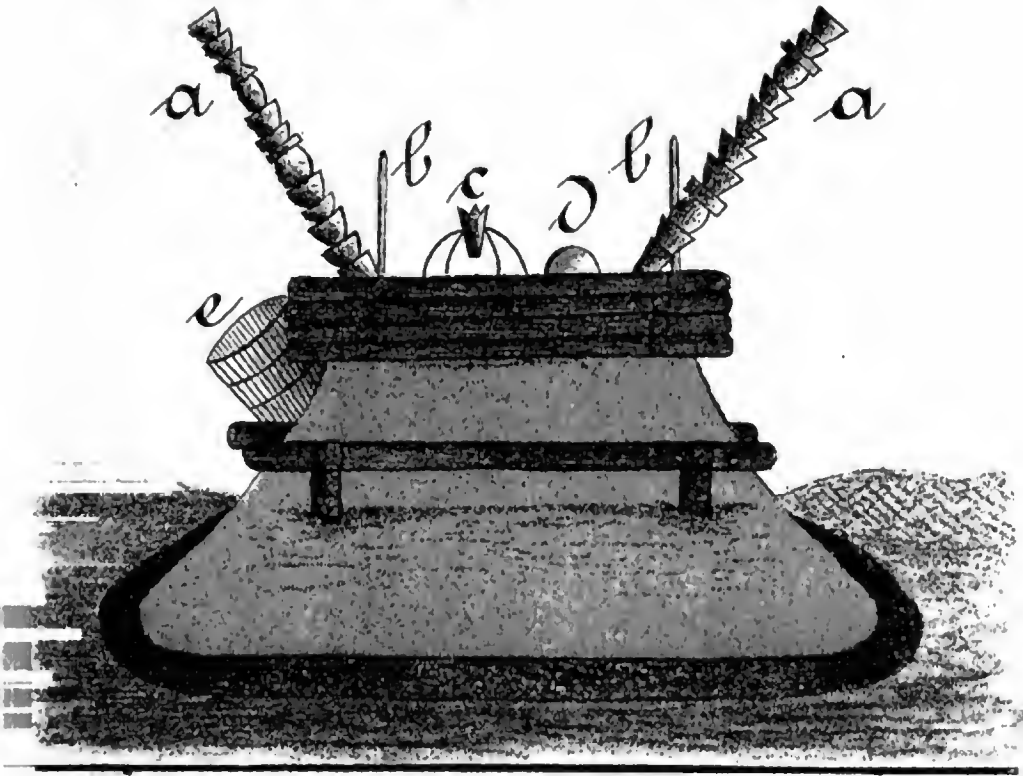


Fig. 2

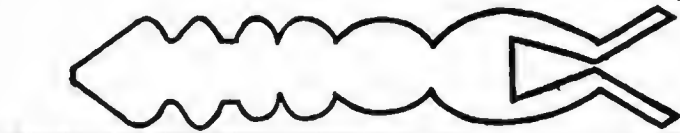


Fig 1

- a - a "nêsan" head-pieces of carved wood equivalent to tombstones.
- b - b "tangga sêmangat" or spirit-steps.
- c "kâki damar" torchstand with "damar" torch.
- d "têmpûrong" coco-nut shell, e "ambong" or basket.

Fig 2

one of the "nêsan" at foot of the tomb of a woman.

row, after which we got into a fine broad stream, just before reaching Tâmek, which was a settlement in LOGAN's time, 32 years ago, but is now abandoned; after the labyrinth through which we had been groping our way, the view which now burst upon us was like enchantment, with its broad lake-like stream, enclosed, so far as the eye could see, by the jungle-clad base of Jâkas; twenty-five minutes with the paddles and a southward turn brought into view the fine hill of Përgâkar Bësar, while the stream slightly narrowed; a few minutes more, and with Pâloh Tampui begins, if possible, still more enchanting scenery, a string of lakes filled with islets of *râsau*, mingled with other growths; in three-quarters of an hour the stream narrows a little more, but is still forty yards wide; here I found nearly four fathoms of water; another quarter of an hour and the lakes came to an end, and we once more had to squeeze and twist our way about for ten minutes along a stream which was barely wide enough for our boat; then again it widened to some fifty yards across, and a quarter of an hour with the paddles brought us to Kumbang. Here are five *Jaknu* huts in a tapioca plantation running down the river's edge; behind them I found two or three tombs, of one of which I attempted a sketch: it was that of the Jâro-krah, one of the subordinate *Jaknu* chiefs. The illustration represents the *pëndam* or tomb of the Jaro-krah—the head of this *Jaknu* settlement—who died of fever nine days before my visit. The body lies about three feet under ground, the tomb, which is made of earth battened smooth, rising about the same height above the surface. A little ditch runs round the grave, wherein the spirit may paddle his canoe. The body lies with the feet pointing towards the West. The ornamental pieces at each end of the grave answer to tombstones and are called *nêsan*, which is borrowed from Malay; on the other side of them are seen the small, plain, upright sticks, called *tangya sêmângat* (the spirit or life steps) to enable the spirit to leave the grave when he requires. It will be seen that there are four horizontal beams on each side of the grave, joined in a framework, making sixteen in all, laid on the top of the grave, and so forming a sort of enclosure, in which are placed, for the use of the deceased, a *têmpûrong* (coconut shell to drink from), a *damar* (or toroh) in its *kâki* (or stand) of rattan, a *bêliông* (adze) handle, and a *kuêli* (or cooking-pan); while outside this framework hangs the *ambong* (or basket worn on the back

with shoulder-straps, and made of *m̃ranti* or some other jungle-tree bark) for the deceased to carry his firewood in. Close by the tomb of the Jûro-krah was that of his niece. I noted three points of difference between them: the first was that the framework on the top of the niece's grave consisted of three horizontal beams, instead of four, or twelve instead of sixteen; 2ndly, one of the ornamental head-pieces was shaped as in figure 2, the other as in that of her uncle; 3rdly, that inside the framework were placed only a coconut shell, a torch on its stand, and a little sugar-cane. Not far off was a site marked off for a child's grave by a coconut shell and some cloth hung upon sticks. In another direction was a child's grave half-finished, the lower framework being in position and some earth being loosely heaped up in its enclosed space, while a small framework, intended for the top, lay close by.

The *Jakuns* of this settlement were engaged by Malays in procuring rattans.

I stopped here about a couple of hours, but did not find any one conversable, partly owing, no doubt, to their having never before seen a European, and partly, perhaps, to our numbers and the size of our boat, which may have suggested some suspicion as to the object of our visit. After we had been a quarter of an hour on our way, the river again became a fine broad stream: ten minutes later I found $7\frac{1}{2}$ fathoms of water at Pëngkâlan Pômang; and twenty minutes more paddling ended what may be called the second set of lakes. We now had to force our painful way through a wilderness of *râsan* and *rûtan*, which fortunately was soon accomplished, and we were comparatively at our ease for a short time; and then had another short struggle, and another equally short respite, after which the remaining one and a half hours' work was through the narrows. We put up for the night near a dilapidated hut. The sound of elephants was once heard, but they did not come near enough to disturb us.

24th.—We were eleven hours on the move yesterday, and did not get off till after nine this morning. By 11 o'clock, *i.e.*, just before we reached Londaug, the river suddenly widened to 50 yards, or more, and we shortly took to poling; the stream narrows again before Kênâlan, which we reached about 12.20. This *Jakun kampong*, the largest on the Sënbrong, is presided over by the Bëntâra, who came

to see me on board the *jalo*r; he is a fine-looking man, powerfully built, very dark, and speaks Malay, like the rest of his race, with a very broad accent, but there is something pleasing in their intonation, which seems, in a way, to suggest their natural simplicity of character. He promised me men with a smaller *jalo*r to take me further up the stream, which grows too small for our boat, next day. Later, I visited him at his own house, a good-sized one, raised about six feet from the ground, in a *kampung* 200 or 300 yards from the river, and tried to extract a vocabulary of his native dialect from him, but it was a failure, with the exception of the following words:—

<i>English.</i>	<i>Sembrong.</i>
Woman	Bětina ⁽¹⁾
Father	Embei
Aunt	Mērēt
Dog	Kōyok
Elephant	Pēchem bēsar
Mosquito	Rēngit ⁽²⁾
Cocoanut	Niu ⁽³⁾
Honey	Manisan lēbah ⁽⁴⁾
Yesterday	Kēmāghik ⁽⁵⁾
Cold	Sēdēk
Come	Kia
Here	Kē-ēng

(¹) Malay with "k" added. "Bětina" in Malay means properly the female of animals, "Pēmpūan" being used to designate womankind, but "Bětina" is often used in place of it.

(²) In Malay, a small fresh-water shell.

(³) Malay "Nior."

(⁴) Malay periphrasis.

(⁵) Malay "Kēmārin."

<i>English.</i>	<i>Sĕmbrong.</i>
One	Sa (¹)
Branch (of a river or tree)	Chĕdang
Green, raw, (in taste)	Mĕt
Grave (tomb)	Pĕndan

A few days' longer sojourn would, no doubt, have brought a few more words to light, but the fact is that the *Jakun* dialect, with but one or two exceptions, is a thing of the past, not only in this part of the country, but throughout that portion of the Peninsula which lies South of Malacca, having completely disappeared before the influence of the Malays, which has been at work for a time which may be reckoned by centuries. Amongst themselves the *Jakuns* speak Malay only, a relic of their old tongue but seldom cropping up in their conversation; and these are the only traces of it remaining, unless we except the *pantang kĕpur* or *bhāsa kĕpur* as LOGAN calls it. In that peculiar vocabulary (excepting of course words of Malay origin and manufacture), I have no doubt that we find embalmed relics of the aboriginal tongue, which, but for the existence of a curious superstition, would have been lost to us.

This practically complete disappearance of the *Jakun* dialects in the South of the Peninsula is owing, doubtless, to the more complete intercourse between the aborigines and the Malays, which has been rendered practicable, both from the East and the West, by the narrowness of this part of the Peninsula, and the easy means of traversing it afforded by the rivers in the absence of any extensive central mountain ranges.

There are still several *Jakun* settlements in Johor, viz., those on the Sĕyong and the Lĕnggiu (the main confluent which forms the Johor River) on the Bĕnut, the Pontian, and the Bĕtu Pahat rivers flowing into the Straits of Malacca: on the eastern side are various little settlements on the Sĕmbrong and its tributaries, including the small community, the greater portion of which are settled on

(¹) Malay "Satu" (?).

the Mâdek, while the remainder, with their Râja, occupy the Mâa, a tributary of the Upper Èndan. The foregoing may be described as the *orang lûlu jûak*, or the tame tribes of the interior. There are, however, within the limits of the Johor territory, I believe, a few representatives also of the *orang liar*, or wild men, as the tamer tribes, conscious of their own superior civilization, are proud to call them; these reside near the source of the Èndan, among the Sêgâmat hills, and, being out of the ordinary course of the Malay trader, have not altogether lost their hold of their own language.

The Batin Tûba of the Lênggin and Sâyong *Jakuns*, a man of great age, had no recollection of a dialect peculiar to his own race, the only non-Malay words in use among them being that for dog, viz., "kôyok," which recalls "kayape" given by RAFFLES in his short list for the same animal. (¹)

MACLAY, six or seven years ago, passing through the same country, seems to have experienced the same difficulty that I have in discovering traces of the aboriginal dialect; and forty years ago LOGAN noticed the fact that Malay had superseded it, while the list of Jokang (*Jakun*?) words given by RAFFLES in 1809 (¹) shews that the process of decay was already far advanced amongst the tribes in the immediate vicinity of Malacca.

Malay camphor has been highly prized by the Chinese from an early period, and the Malays must, at the outset, have had recourse to the aborigines to help them in their search for this precious article of commerce.

Reasons are not wanting which point to the conclusion that in the *pautang kâpur* we find relics of the *Jakun* dialects. I use the plural advisedly, for those of the Pontian and Mâdek are different from the rest.

The reasons may be stated as follows. The Malays are not the originators of the *pautang kâpur*, but learn it from the *Jakuns*, who may *primâ facie* be assumed to be unequal to the coinage of a special language to suit their object in this case, while it is not at all unlikely that those of them who had dealings with the Malays should become aware of the advantages of their position,

(¹) No. 4 Journal, Straits Branch of the Royal Asiatic Society, December, 1879, p. 6.

and turn their language to account in the search for camphor, by representing it as a charm, without which all search would be un-availing. Thus, while self-interest would prompt the retention and handing down of a sufficient vocabulary to meet their wants in this respect, their constantly increasing intercourse with the Malays would inevitably prove fatal to the rest of their language. The vocabulary of the *pantang kápur* itself, too, would, in the lapse of time, naturally suffer diminution by the death of noted collectors and the loss occurring through transmission from generation to generation, and their own language being forgotten, the *Jakuns* would have recourse to the Malay periphrases which now form so large a portion of it, and which shew them to have been unequal to the invention of a special vocabulary for a particular purpose.

But more to the point than any theories on the subject, is the fact, that some of the older or non-Malay words are identical with words of the same meaning in some of the aboriginal dialects further North: the following are instances:—

Jô-oh	to Drink
Chëndia	a Hut
Tongkat	the Sun
Sëliumma	Tiger

while the following shew signs of connection:—

<i>English.</i>	<i>Pantang kápur.</i>	<i>Sëmang.</i>
Deer	Sësunggong	Sig, Sug
White	Pintul	Pëlëtan, Bëltan
Tongco	Pëlen, Lin	Lentak, Lentek
		<i>Jakun.</i>
Pig	Sëmungko	Kámo, Kumoku

These examples are but few, doubtless, but, pending further col-

lection and comparison of aboriginal dialects and *pantang kâpur*, may, I think, be accepted as sufficiently confirming my view of the matter.

M. MIKLUHO-MACLAY also regards the *pantang kâpur* as being a relic of the old aboriginal tongue (Journal No. 1, Straits Branch of the Royal Asiatic Society, July, 1878, p.p. 39-40), dissenting from the view of LOGAN, who seems to look upon it as having been manufactured expressly in accordance with the superstition, for he says (Journal of the Indian Archipelago, Vol. I., p. 263) "whoever may have been the originator of this superstition, it is evidently based on the fact that although camphor trees are abundant, it very frequently happens that no camphor can be obtained from them." "Were it otherwise," said an old Bèndā, who was singularly free from superstitions of any kind, "camphor is so valuable that not a single full-grown tree would be left in the forest." LOGAN mentions the eating of earth as a concomitant of the use of *pantang kâpur*; another sacrifice required by this superstition is the complete abstinence, while in search of camphor, from bathing or washing. These accompaniments of the superstition may be considered perhaps to bear against the theory I have advocated, but without them the *pantang kâpur* would hardly be complete, and they would readily be suggested by the *pogungs*, to whose cunning and influence over the Malays, LOGAN bears striking testimony. I have myself observed the complete belief the latter have in their powers, the Malays at Kwâla Mâdek, for instance, asserted of the Jûro-krah resident there, that he used to walk round the *kampung* at night and drive away the tigers without any weapons.

At this place, *Kampung Kênâlan*, I found a clearing, but no cultivation; on asking the reason, I was told they were too busy getting rattans for the Malays, which they do at a fixed price in rice and other articles, such as clothing, crockery, *pârangs*, salt, and tobacco. They have become Malays as to dress as well as in language.

One young girl rather amused my men by the affectation of concealing her face with her *kain tédong kepâla* after the Malay fashion; they likewise imitate the Malays in the occasional introduction of an *Allah* into their conversation, but they have no

religion, not having adopted Mahomedanism as yet (the legends I referred to in my trip to Blûmut seem to be quite unknown to the body of the people), though such women as are married to Malays have to be formally converted, not, however, unless they are really married.

The Bëntara presented me with a fragment of a very fine prism of smoky quartz, which he said had been brought to him by one of his men some time previously. Two of them were at the foot of Gûnong Bêchûak, (1) when a large boulder came rolling down the steep, they saw something glittering become detached from it in its downward course, and secured it; but thinking it too bulky, they smashed it and brought home only the fragment which was given to me; the original prism must have been 7 or 8 inches long by 3 or 4 in diameter.

On the 25th, I started in a small *jalo*r with two Malays and four *Jakuns* for the source of the Sêmbrong, and after 3½ hours' work along a very winding, narrow and often blocked-up stream, reached the landing-place, Pêngkâlan Tongkes, where our boat-work ended.

About 1 hour 40 minutes from Kênâlan we came upon what was called *kâyu tîl'kong*, a tree stem sunk in the stream; it used to overhang the river, and was said to be *puâka*, or haunted by an evil-spirit who was certain to cause death or illness to any one who should cut it. After 1½ hours' smart walking from Pêngkâlan Tongkes we reached Ulu Mêlêtir. One Mersa told me a story, the second day of our ascent of the Sêmbrong, about the *ular sawa rêdam* (water python), (2) which I heard at the time with some incredulity; subsequent personal experience, however, induced me to be less sceptical. One Mersa's story was that a Malay of his acquaintance was asleep one night in his boat on a river when he was disturbed by a pull at his sleeping-cloth, on rousing himself he found the intruder to be a water python, which, finding itself observed, got away before the Malay could get hold of his *pârang*

(1) A two-peaked mountain of the Bêlûmut range.

(2) This is rendered "water python," being, according to the Malays, the water variety of the "*ular sawa*," which is their name for the "python," but it is hardly necessary to observe that they are unsafe authorities on such points.

(wood-cutting knife). Having placed his knife conveniently, the man went to sleep again, but before the night was past, he was again disturbed in the same way; this time he got hold of his *pārang* in time to make a cut at the reptile through the awning of his boat, over which he saw it making its escape, and when daylight came he found traces of blood about the gash he had made in the awning. My own experience was as follows: On the evening of our arrival at Kēnālan, I was lying in the middle of the boat just dozing off, while two or three of the men were discussing their rice forward; all of a sudden I heard in my sleep cries of "*ūlar, ūlan, ūlar*" ("a snake, Sir, a snake!") repeated with increasing energy, till I thought I was being pursued by some huge serpent, and awaked finding myself running into the middle of the men's rice; on enquiring what it was, the youth who had cried out said that happening to look in my direction he had seen a large snake on the horizontal support of the awning within a yard of my face swaying to and fro, looking alternately at the lamp which was hanging at my feet, and at me, (my spectacles, which no doubt reflected the lamp, probably attracted his attention), and the youth was then so horror-stricken that he could do nothing but shriek at me, thinking every moment I should be attacked; while he was telling me this, one of the others went at the beast with his *pārang*, but was too late to get near it. When Cik Musa came on board and heard of this, he was quite excited, said at once that it was a water python (which recalled the story he had told me three days before) and had the boat moved a little further up the stream where the river was a little more open.

At Mēlētir, we found a good-sized *dāda lang* ⁽¹⁾ hut. Here we decided to put up for the night, as we wanted a clear day to get to the *sinpei* and return. The next morning, half an hour's rapid walking through very wet jungle, full of swamps and slippery roots, brought us to a small shallow stream about six feet wide flowing through *rāsau tikus* ⁽²⁾ (a small graceful variety of the *rāsau* which grows so abundantly in the Johor river); this was called the Pang-gong and issued from a swamp which was described by the *Jakrus*

(1) "*Dāda lang*," breast of a kite; i.e., a half-roof or "lean-to."

(2) "*Tikus*," rat, is commonly used to indicate a small variety of anything.

as very extensive, and so full of dense undergrowth and rattans, that it had never been penetrated.

Just North of where we came upon it, the Panggong bifurcated, itself flowing northward, till it joined the Mëlëtir, while the other branch, which was the source of the Batu Pahat Sëmbrong, flowed at first westward and then northward for some distance parallel with the Panggong, making a series of curious loops called by the Malays *simpei* or hoops. A Malay once thought he would facilitate the communication between the two sides of the Peninsula by cutting a channel which should connect the Sëmbrong (Batu Pahat) and the Panggong, but he had no sooner set to work than he was taken ill, which was a clear warning that the powers of the jungle were unfavourable to his undertaking, and he accordingly abandoned it. After the *simpei* the Sëmbrong and Panggong flow westward and eastward, towards the Batu Pahat and Mëlëtir, respectively. It will be seen, from what has been stated above, that if we consider the swamp as water, the space between the Panggong and the Mëlëtir may be regarded as an island. Though the names change before we reach the source, it is clear that the two Sëmbrongs have a common source, afterwards separating; and though they may thus be said to be originally one and the same stream, yet it was hardly in this way that they were regarded by Logan, who seems to have looked upon them as a sort of canal across the Peninsula; whereas really they issue as one stream from a swamp on rising ground and bifurcate immediately afterwards. None the less, of course, is Johor, literally speaking, an island.

Having satisfied myself on these points, and being pressed for time, I gave up the idea of going to the *simpei*, and we made our way back to Pëngkalan Tongkos and reached Kënalan in the middle of the afternoon. Started on our return journey about noon the following day, the 27th, and reached the Kwala Sëmbrong Station just before 11 p.m. on the 28th, i.e., did in thirty-five hours a distance we had taken five and a half days to cover in the ascent!—forty-two hours actually on the way.

About 9 p.m. on the 29th, I started down the Endau to take the course from the mouth up to the Station which I had been unable to do on the way up. I returned on the afternoon of the 31st, having succeeded in my object. At the Padang Police Station, or

rather at Kampong Pâdang, about three-quarters of a mile from the mouth of the Endau, I found a Trënggânu Chinaman just started with a new house, and cultivating the ground round him; he announced his intention of putting up fishing stakes till the N. E. monsoon set in. He is, I believe, the only Chinaman on the Johor side of the Endau; he was a Trënggânu born man, and had kept a shop and opened a gambier plantation there, but he said he could not stand the ways of the present Sultan, and had resolved to try his luck elsewhere; though he described the country as a fine one, and likely to be prosperous and opened up if industrious folk get a fair chance. If this were a solitary case, the story might raise suspicion against the narrator, but I believe no one has a good word to say for the present Sultan of Trënggânu. With regard to the Kwâla Endau, and the N. E. monsoon, which, of course, greatly hampers communication and trade, our friend the Chinaman said that vessels lie behind Tanjong Këmpit for water, and it is not impossible that the extension of a small breakwater beyond it, or from Këban Dârut, might make a safe place even during the N. E. monsoon.

On the 2nd September, having re-ascended the Sëmborong a bit, we entered the Kahang, a stream which takes its rise in Gûnong Blâmut, and about 3.15 p.m. we reached Kwâla Mâdek (*Jakun kampong*). Here we put up for the night, and were detained till the 4th, CNE MAHOMED ALI's promised *Jakuns* not being ready, but engaged at another *kampong* preparing for a rattan-collecting expedition into the jungle on behalf of some Malay traders we found here. These latter, however, went up the river after them the evening of our arrival, and succeeded in stopping them, to my satisfaction, for my time was drawing very short. One of these traders was a Bâtu Bahâra man; he seemed to be quite a travelled man, knowing a good deal of the Peninsula, as well as Sumatra. Among his experiences in the latter country, was three years' trading in the Battak country. He described the Battaks as being divided into three tribes, and spoke highly of their prosperity and power; the mountain tribes he praised as remarkably good horsemen, stating that they rode their ponies recklessly down steep slopes at full speed, and sometimes stood on their ponies' backs, instead of riding astride them. He was very enthusiastic on the Achinese question,

affirming that the Dutch could never do much harm so long as the Battaks supported the Achinese: they could furnish them all sorts of supplies, including gunpowder, and the blockade was useless; while he went on to add that if the Battaks should decide upon giving the Achinese active assistance, the Dutch would have seriously to look to themselves; for, in his opinion, if the Battaks chose to set to work, they could drive the Dutch clean out of the country, such a high estimate had he formed of their resources and warlike capabilities, not to mention the very large population of the country.

This trader accompanied me up the river, in order to get the labour of the *Jakuns* on their return trip, after leaving me. I found one or two *Jakuns* here suffering from what must have been rheumatism, or the results of ague, and left sal volatile and quinine with them. On the morning of the 4th got off at last, had to stop half an hour on account of the rain, and, after an hour and twenty minutes' progress, entered on our left a channel connecting the Mâdek with the Kahang, the passage of which into the Mâdek took us about 20 minutes. A heavy shower detained us at Pëngkâlan Dûrian, and we prevailed upon one of the *Jakuns* to get the honey-comb from a bees' nest in a tree close by; it was rather old and dry, but I got half a cup of honey from it of a rather peculiar flavour, which my Chinese boy appreciated more than I did; we moored for the night opposite Padang Jërkeh.

About an hour and a half before stopping for the night we had put on shore a couple of men with dogs to hunt *pëlandok*,⁽¹⁾ as they call the *nûpoh*, which is what they mostly catch, and is a size larger than the *pëlandok*. Our men succeeded in securing a young *nûpoh*. A good lot of snags to-day, and river very winding, banks high a great part of the way. Caught a frog perched on a log in the stream, the variety of *kâtak* called *biak*, from the noise he makes probably—a high soprano—"wak, wak, wak," which contrasts curiously with the deep notes of some of his relations; I measured him and found his dimensions as follows: body 4 inches long, $1\frac{1}{2}$ inches broad, head across the eyes $1\frac{1}{2}$ inches; forelegs 3 inches long at stretch; hind legs 6 inches long at stretch. His

(1) "*Pëlandok*" seems to be used generically oftener than specifically.

skin was rugged, and of a blackish-brown colour, developing a yellowish tint towards the hind quarters, he had 4 toes in the fore feet which were not webbed, while the hind feet, containing 5 toes, were webbed. All the *Jakuns*, on being questioned after dinner, professed complete ignorance of the route viâ Blûmut or Chimundong, but, I am afraid, suspicious as to the duration of the rice supply had something to do with their ignorance, as the route in question involved one or perhaps two days' additional travelling.

5th September.—Though eight and a half hours elapsed from the time of starting in the morning to our anchoring in the afternoon, some idea of the slowness of our progress may be formed from the fact that we were in motion little more than half of the time, over four hours being spent in getting on to and off snags, and cutting through them, and grounding on shallows. Caught *ikan pãlong*, and *ikan umbut-umbut* or *kãran* as it is also called; the former run to the size of about eight to the *kati*, the latter to about four to the *kati*, and have a dark brownish-black upper part, belly of a white hue, tail pinkish-red. The *pãlandok* hunt was going on in the morning, and the finish of one of the chases took place close to our boat; the victim, being hard pressed by the dogs, in hopes of spoiling the scent, took to the water, only keeping its head just above the surface in a hollow in the bank; it was successful in its object; the dogs were puzzled and passed the spot; but the prey was not to escape, for CUR MUSA got into the water and dived, coming up just at the right spot, and captured the wretched animal while still intent upon the dogs, whose yells of excitement were still audible.

Saw the first *bãrtam* plant in these parts. Jungle a good deal more open the last day or two, at all events for some distance from the river banks, otherwise the *pãlandok* chase would hardly have been practicable.

7th September.—To-day again out of 8½ hours' boating, more than 4½ were taken up with snags, shallows, &c., though part of the remaining time we travelled a fair pace.

On stopping for the night, found one of the boats had secured a fine *tóman* or *tíman* of some five *kati* in weight; it was very good with *chili*, though having little flavour of its own. This fish runs to forty *kati* in weight and devours its own young.

7th September.—To-day $4\frac{1}{2}$ hours brought us to Chëndia Bëmban, the end of our boating journey; of this $1\frac{1}{2}$ hours were lost in the usual way.

Passed some wild *pīnang* trees. After passing a snag, some overhanging branches which obstructed our progress had to be cut away, and when they began to fall, an *ūlar sawa rëndam*, or water python, some seven feet long and remarkably handsome with his blue and orange markings, dropped into the water, having been disturbed apparently in the middle of a comfortable snooze, though he had chosen an odd place for the purpose: it seemed a more suitable situation for offensive operations. He was badly cut by one or two of the men before he could get away, bearing too bad a character to be treated with any consideration. An *īkan kēlah*, weighing about two *kati*, was secured by spear, that of the dexterous *Āgor*, a *Jakun* to whose skill we owed most of the game and fish procured on our way up the river.

As we could not reach the first resting place before dark, it was decided to put off our start till next morning. The banks of the river at this place, Chëndia Bëmban, were covered with elephant tracks, and the bushes and ferns were crushed flat where they had been lying down. In the afternoon, one or two of the party who had been away to a little distance brought the news that there were elephants not far off, and the excitement which this caused was increased when it was observed, towards dusk, that the river had suddenly become muddy, a sign that some of the huge creatures were having a bath not very far up the stream; this kept the party on the alert, to be ready to do what they could to frighten away the herd should they come in our direction, as they have a way sometimes of advancing down-stream, and unless they could be diverted from their course, they would walk right through and over us, quite unconscious of such petty obstacles as canoes and baggage. The night, however, passed quietly without any disturbance. During the evening a very unpleasant low sound was heard, something between a growl and a chuckle, which some of the Malays thought came from an approaching elephant, while I thought of a tiger; but the *Jakuns* knew better, it was a frog giving vent to his feelings in the bank; *Āgor* went and secured him; he was a smooth-skinned variety, with very long legs and of large size, upper part dark

greenish brown, paling at the sides, belly white; this was quite a young specimen, not full-grown. *Agor* said that a full-grown specimen would be very much larger. This certainly was nearly the biggest frog I had ever seen, so that the species is probably one of the largest in the Peninsula; it is called *bāong dūdūk* ⁽¹⁾ in Malay, *bēbap* being the *Jakun* term, which appears to be a generic one for frog. The noise this species makes is almost unearthly, and quite disagreeable; there is one other sound I noticed in the jungle at night-time, which, though otherwise different, resembles it in this peculiar way; it is that made by the *hantu sēmambu*, which is very weird, consisting of three or four long-drawn notes rising and falling but slightly, but the effect it is impossible to describe; the *Jakuns* say it is a weather guide. Further inquiry regarding the route to Chimundong only elicited the statement that if we followed the course of the Mādek for seven or eight days we should reach it, or might do so in four days through the jungle, but that there was no regular path to it. I have already hinted reasons why the true facts were probably withheld from me, but want of time obliged me to forego the application of any test as to the truth of the statements made.

A cousin of CHE MUSA, named MĒLAN, whom he had brought with him from the Lēnggor, stated that a few months before, he had gone with a party of *Jakuns* from Kēnālan (the chief *Jakun* settlement on the Sēmbrong) to the source of the Kahang at the foot of Gūnong Blūant, a six days' journey (probably circuitous) through the jungle; and that half way they came upon the remains of an extensive building surrounded with brick walls, not very far from the river: there were also, he said, plenty of cultivated fruit trees about; he mentioned, I think, the dūrian and manggostin among others. The *Jakuns* called the place Dēlek, but could tell him nothing about the building. Now LOGAN, in his account of the Kahang, mentions Danlek as being a place on that river whither the *Jakuns* habitually resorted to enjoy themselves in quiet during the dūrian season: there can be no doubt that Dēlek and Danlek are one and the same, but LOGAN seems to have heard nothing about the ruins in the neighbourhood. In his paper "Ethnological Excursions in the Malay Peninsula" (Journal Straits Branch of the

(1) "Sāong," usually a fish in Malay.

Royal Asiatic Society, No. 2, p. 220, and footnote) MACLAY mentions Tandiong (tanjong?) Genteng on the Kahang river as the old seat, according to *Jakun* tradition, of the Râja Bënûa, and says that "it was merely a large plain, clear of all trees close to the river." He also suggests burning the *lâlang* (wild grass) and jungle with a view to a search for tools, arms and coins; but he was evidently told nothing about ruins. MĒLAN was much crossquestioned on the subject by myself as well as CHE MUSA and CHE MA' ALI, but adhered strictly to his statement about the ruins. During the various vicissitudes of the Johor dynasty, the sovereigns, according to tradition, sometimes took refuge in the interior of Johor, when they did not go as far as Pahang, and these ruins may be the remains of some such asylum. The *Jakuns* state that their line of Râjas, i.e., Râja Bënûa, is descended from the Malays in this way; that a queen of Johor, having been obliged by her enemies to flee into the interior, remained there and wedded a *Jakun* chief, their progeny assuming the title of Râja "Bënûak," as they themselves call it.

It is not impossible that this tradition may be well-founded, a royal caprice would, under such circumstances, have little to restrain it, whether before or after Mahomedan days.

The short time I spent in the company of members of the Mâdek community, sufficiently accounts for the meagre information I was able to gather from them, especially as to their dialect, of which specimens could only be found few and far between, scattered throughout the general body of Malay, which is now their native tongue. Of the hundred words given in the Vocabulary prepared by the Society for the collectors of dialects, most have only Malay equivalents, pronounced with that broad and sometimes slightly nasal accent which characterises all the *Jakuns* I have met. I have inserted a few of them in the table, to illustrate the difference between their pronunciation and that of the ordinary Malay. Curiously enough the Society's vocabulary omits the "tiger" from its list.

Man

Ūrang (Malay "Ōrang.")

Woman

"Bëtînak," and "Âmei" (The latter the ordinary mode of addressing women of middle or more advanced age; the

literal meaning is "aunt.")

[N. B.—Most words ending with short "a" are sounded as if ending with a partly sounded "k."]]

Child	Auak ⁽¹⁾ } ⁽¹⁾ [Broad sound]. (These are all Malay words, ⁽²⁾
Male child	Âwang ⁽²⁾ } "lâki-lâki" or "jantan" in
Female child	Dâyang ⁽²⁾ } Malay ⁽³⁾ "përampûan" or "bëtina" in Malay.)
Friend	Sābeh [ä=aw] (From "sohbat" a corruption of Malay "sahâbat.")
Eye-brow	Lâlis.
Forehead	Këning (Malay for "eye-brow.")
Small hair on forehead	} Gigi rambut (Malay "teeth of hair.")
Knee	To'-ot (cf. Malay "lûtut.")
Heel	Tunbit (Malay "tûmit.")
Ant	Mërrêt [Second syllable prolonged with a broad sound. Sëmborong dialect, ditto.]
Dog	Kôyok (Common to all the Johor <i>Jakuns</i> .)
Elephant	Pëchem bësar.
Mosquito	Rëngât [Second syllable prolonged broad.]
Pig	Jôkôt [Second syllable broad prolonged]. (This is the red-haired variety of the wild pig; the ordinary black kind is "Bâbi" as in Malay.)
Frog	Bëbap.
Lizard	Dangkui (A black and orange variety.)
Large water lizard	Gëriang (Larger than "biâwak.")

Tortoise (small)	{ Jahûk. Jangkeng.
Fish (fresh-water)	{ Nôm Bĕgâhak Sĕngârat Tâman Sĕbârau } (These are Malay.)
Beast, (or dragon ?)	Rĕmañ ["ñ" like final "gue" in French.]
To break the neck of a fish	{ Kleng.
To angle	Mĕpas. (Pêrak Malay.)
Bark (of a tree)	Kĕlûpak ("Kĕlûpak or Kĕlûpak bunga," Malay, calyx and petals of a flower.)
Grater	Lâgan.
Cocoanut shell	Dâsar. (Malay, after use. Unused, "tem- pûrong.")
Firewood	Chĕ-lehêr.
Fishing-basket (with bait in the mouth)	{ Sĕgel. (Basket, Malay, of rattan or wood to keep things or trapped ani- mals in.)
Fishing-basket (with thorns)	{ Sĕntâpok. ("Tâpok.")
Blowpipe	Tĕmiang. (A variety of "bûluh" or bambu.)
Waist-cloth	Bĕngkong. (Malay.)
River	Âyer (Malay.)
Sea	Bâruh (Used in nearly the same sense by the Malays of Province Wellesley, im- plying rather the shore than the sea itself. Also used by Malays of the sea-

	board as against the interior. Also "a little below" South as against North.)
Valley	Châruk (cf. Malay "chêruk" corner.)
Eclipse (sun)	Mâta hâri tangkak rêmân.
Eclipse (moon)	Bâlan tangkak rêmân (The sun or moon being caught by the beast. First two words Malay, "tangkak" being a corrupted form of "tangkap.")
Sign, sound	Pagam.
Yesterday	Kēmâghik (Corrupted from Malay "Kêl-mârin.")
Yes	Yak (Malay "yâ.")
No	Bê.
Never	Bēsûlah (Perhaps compound word, first syllable being originally "bê.")
Dead (wife)	Bâluk. (Malay, to cry or wail several together.)
Dead (child)	Mantai ["ai" broad.]
Small	Kêchôn [n nasal twang to vowel.] (Malay "Kêchil.")
Female	Bêtînak (Malay "bêtîna" with "k" added.)
Affectionate	Mēsêl.
Angry	Têkêñ.
Pleasant	Sêrôt.
Divorced	Siloi (Rather like a Chinese attempt at "Chêrei.")
Will, pleasure	Mâjen.

Not get, unsuccessful	} Po-hûs.
Raw, green (of taste)	} Juhût.
Don't know	Bôdek (Malay "bôdoh" unlearned, ignorant?)
Feeble	{ Kêbok. (Malay?) Bê-rôt. Bê-âlah.
Come	Kiah.
Go	Jok.
Drink	Jo-ôh (The same word as in <i>pantang kâpur</i> with same meaning.) Journal S. B., R. A. S., No. 3, July, 1879, p. 113.
This	Yak.
That	Êndoh.
Grave (burial-place)	Pëndam.
To tie a cloth round the neck with intent to strangle one's self	Bějîrôt [Last syllable broad.] (Form of lamentation at death of relation practised by women. Malay "chêrut" to strangle one's self with a cloth?).

A comparison of the Sëmborong and Mâdek lists of words, shews that, while a general agreement subsists between them, there are, notwithstanding, local differences, as follows:—

Sëmborong.	Mâdek.	English.
Mbei	Bâpa (Malay)	Father
Kain gënding (Malay)	Běngkong (Malay)	Waist-cloth

Sědek	Sějok (Malay)	Cold
Kě-ěng	Sini (Malay)	Here, hither
Me-ēt	Juhūt	Raw, green (in taste)

Further investigation would, no doubt, bring this out more clearly.

A reference to MACLAY'S "Dialects of the Orang Hûtan of Johor" and "of the Mixed Tribes of the Orang Hûtan of the Interior" (Journal of the Straits Branch of the Royal Asiatic Society, No. 1, July, 1878, pp. 41, 42, and 44) shews only two words common to his and my lists—"Mbai," father, in the Sěmbrong dialect, and "Âmoi," woman, in the Mădek dialect. I went through MACLAY'S lists with both the tribes, but these were the only words they recognised; of the others they professed complete ignorance. In his paper (already referred to, p. 40) MACLAY says: "I found it impossible to ascertain sufficiently the number and limitation of the different dialoots. That more have existed is probable. I have arranged, somewhat arbitrarily, the following words into two dialects. I have only noted down (as said before) those words which appeared to me not Malay." And in a note to the foregoing paragraph he further says: "As the Orang Hûtan are nomads, it appears to me quite immaterial to specify the place in which I have taken down the words."

It is certainly to be regretted that M. MACLAY did not give whatever information he had gained regarding the number and limitation of the dialects, however incomplete. The plan of "arbitrary arrangement" leaves us quite in the dark as to whether the dialects given come from North, South, or Central Johor. It is true that the "Orang Hûtan" are nomads, but only within their own districts, the intrusion into which, for any purpose other than mere thoroughfare, by members of another tribe, is greatly resented, and sometimes leads to quarrels, which are so rare amongst these people. The insertion of the place where the words were taken down would have shewn to which tribe the people belonged.

There still appear to be several words in M. MACLAY'S list which are—some certainly, others possibly—of Malay origin; of the first class are the following:—

Meath Bibir (Malay for "lips," part for the whole.)

Leg Bëtít, lûtát ("bëtis" and "lûtut" Malay for calf of leg and knee, respectively.)

Two Dua

Moon Bulatnah (corrupt form of Malay "bulan.")
Under the second I would place:—

Sun Matbri, tonkat (Malay "tongkat.")

Head Bâbon (Malay "ûbon-ûbon.")

Eyes Med, mot, padingo (Malay "mata," "pëngok" from "tengok," to see.)

Stomach Lopot (Malay "prut," by metathesis?)

In "matbri" we have "mat"="mata" eye, "bri" either the word in the list for "forest" or a corrupt form of "hâri."

Whether "tonkat," or "tongkat" which means "walking stick" in Malay, is more than a mere coincidence is a matter for conjecture.

"Bâbon" is, in all probability, a contraction from the Malay, "ûbon-ûbon," the crown of the head: "ûban" is grey hairs.

"Med" and "mot" are probably different forms of "mata," the eye; while "padingo" suggests the idea that it derives from the Malay "tengok," being a corrupt form of the verbal substantive "pëngok" which is the equivalent for "eye" in *pantung kâpur*.

[If MACLAY was careful to distinguish, when collecting words, between the old dialect and the *pantung kâpur*, the occurrence in a list, purporting to belong to the former, of words formed from Malayan epithets, is a strong argument in favour of the latter being a relic of it.]

The Mâdek tribe, with the exception of that portion which removed recently to Sangei Mâs on the Upper Endau, seems to be confined to the watershed of the Kahang and Mâdek with their tributaries. Their numbers are now very limited, comprising no more than thirty souls. They are not uniform in type, even their limited community presenting several varieties, which is accounted for by the intermarriage with Malays; the Chinese have, I believe, had little, if any, intercourse with this tribe.

One chief characteristic which distinguishes the Mâdek tribe from *Jakuns* of other tribes, is the absence of any rite resembling circumcision; while the Sëmbrong tribe make an incision, but do not circumeise. The Mâdek people, however, relate that they used to observe the custom, but that it was given up owing to untoward circumstances, which took place two or three hundred years ago as follows. On one occasion when the rite was observed, several of the tribe died of the effects; it was ascertained that the knives used for the purpose had been accidentally placed in a vessel containing *ipoh*, the poison with which their blowpipe arrows are habitually tipped: from that time the observance of the rite was discontinued.

On the death of a man, tobacco and betel-leaf are placed on his chest, and the relations weep and wail, at the same time knocking their heads against the wall: while the women tie a cloth round their necks to strangle themselves (*bějirôt*), but the men interfere before any harm is done nowadays, though, in former times, the women are said to have actually strangled themselves on such occasions. The burial usually takes place next day, sometimes on the second day, if there be any reason for delay. All the property of the deceased, comprising his weapons, a cup and plate, and clothing, are buried with him, together with some rice. The depth of the grave is up to the breasts. An axe, torch in stand, coconut shell gourd, and pan are placed on the top of the grave.

Pógang bisar is a *pógang* who reaches heaven by disappearing without death, or who on sickening to death requests *kěmmian* to be burnt over him for two days after his (apparent) death, instead of being wept over and buried, when he comes to life again.

The tribe used to live up the Kahang, but CUE MA' ALI (the head of the Kwâla Sëmbrong Station) insisted on their removing, for his convenience, to Kwâla Mâdek.

The *kâyû kělundang*, or *gělundang*, as it is also called, which is struck by the attendants of the *pógang* when the latter is exercising his skill on behalf of a sick man, must, among the Mâdek people, be of *měráwan* wood and no other. While his attendants strike the *kâyû kělundang*, the *pógang* waves a spray of the *châcak* tree, at the same time making his incantations.

If a man dies in debt, his debts are paid to the extent of one half, the creditor losing the other half, even though there be property enough left to pay the whole; the balance goes to the next of kin, to the widow, if there be one, in preference to a grown-up son, but a man can leave his property to any relation he pleases.

A curious superstition prevails among the Mâdek people, which, so long as children are unable to walk, prevents their parents from using as food certain fish and animals; as soon as the little ones have acquired the use of their legs this restriction is removed, and the parents are once more able to indulge in what has so long been *pantang* or "forbidden." Should this superstition not be complied with, and any parent eat of any of the forbidden creatures during the period of restriction, the children are supposed to be liable to an illness called *bûsong*,⁽¹⁾ arising, according to the Malays, from *prût kumbong* or swollen stomach. Protuberant bellies seem to be the striking feature of most native children of whatever race in these countries. The following is the list of fish and animals which are *pantang* under the above circumstances:—Fish—*nôm*, *bêgâhak*, *sêngârat*, *tâman*, and *sêbârau*; eggs, and fowls; beasts—the deer (both *râsa* and *kijang*) the *pêlandok* (including the *nâpoh*), the *jokôt*, and *bâbi*, the *biâcak* (water lizard), *gêriang* (large water lizard), the *kûra-kûra* (land-tortoise), *bânîng* (variety of the preceding, but larger, and shell flatter), *biâku* (like *pênîu tuntong*, a freshwater turtle, but long-necked, perches on dead wood in the rivers), *jahûk*, (a small tortoise.)

The *Jakuns* of Johor though, as has been noticed, no longer possessing a distinct language of their own, and but few members of a pure *Jakun* type, none the less consider themselves to be, and are still held to be, a race apart and distinct. The Malays, of course, look down upon them, and shew it by their treatment of them. I am desirous of drawing public attention to this treatment of a simple, laborious, and inoffensive people in the hope of thereby securing an amelioration of their condition.

Some few years back, the *Jakuns* on the Endau, that is to say, the Endau, Sêmbong, and their tributaries, were in comparatively comfortable circumstances, procuring the produce of the jungle for traders, and receiving the ordinary returns in kind, or planting

(1) A foaming yellow stool.

tapioca, klêdek, sugar-cane, and plantains; they finding Johor rule comparatively quiet, rather took to the Johor side of the Endan, to the annoyance of the Pahang authorities. These latter in their jealousy issued an attractive but deceitful proclamation intended to draw back the runaway *Jakun* into Pahang territory on pretence of celebrating some ancestral feast, but in reality with the intention of enslaving them: the *Jakuns* were induced to go into Pahang, but got wind of what was likely to happen in time for some of them to get away. On another occasion, some Pahang *Jakuns* crossed over into Johor territory; CNE NGKU DA, of Pianggu, who is the local chief on the Pahang side, ordered them to return, and shot one of them who did so; nor are the foregoing solitary instances of the inhuman treatment suffered by these tribes, as by similar tribes in the North of the Peninsula, at the hands of the Malays; but it is needless to multiply instances, the fact that it is systematic is already sufficiently well-known and authenticated, though it has been hitherto allowed (except in Pêrak) to remain an unnoticed fact. What is required is that steps should be taken to make the ruling powers in Malay States aware that we can no longer view with indifference any toleration by them of misconduct by any of their subjects towards the aborigines residing in their territories, and that we shall expect severe measures to be adopted against any offending in this way.

The Malays of Johor, though they have not imitated the brutal conduct of the Pahangites, have nevertheless taken advantage, though not perhaps more than is natural, of their superior position in their dealings with the *Jakuns*. They do not give them the fair market value in kind for the jungle produce they receive from them, and are not content with an exchange which brings them less than 100 to 200 per cent. profit; by this means they keep the *Jakun* constantly in their debt; he has learnt wants now which he has to work so hard to satisfy that he has little or no time left for the cultivation which would formerly have kept him in comfort: still more is this the case, where they are forced to work for a local Malay official, not at the ordinary rates of exchange in kind, but merely for sufficient rice to keep body and soul together, while they toil to satisfy his grasping greed. Treatment such as this elicits comment even from the apathetic Malay, especially when he is a fellow-sufferer, perhaps a constable on a station drawing a monthly

salary, which he seldom, if ever, enjoys the sight of, though it is, no doubt, transmitted regularly from Singapore. But this is merely by the way, an illustration of personal characteristics which do not end with the *Jakuns*.

Now the *Jakuns* cannot get on without rice, of which the Malays have taught them the value, but which was not originally in their list of articles of food; they have gone so far as to cultivate it for the last 30 years when allowed the needful leisure. During our ascent of the Sēmbong, we met a dilapidated *Jakun* in a more dilapidated canoe, who told us he had had no rice for three days with the air of one starved, and so the poor creature looked. We gave him temporary supplies.

On the 8th September we left our Bān Bahara friend in possession of the *jalo*r at Chēndia Bēmban, and six hours' walking brought us to Âyēr Jamban, our resting place for the night. Our course for the first hour or so was in a South-East direction, it then turned South, and later South-South-West. The country was undulating, rising nowhere above 150 feet, though the gradients were sometimes pretty steep; the low grounds were mostly swamps, occasionally made more cheerful by a small stream, but more often remarkable for their plentiful supply of thorny rattans. The narrow pass of Bukit Pētōdak was the stony bed of a stream, strewn with quartz, sandstone, and a little iron ore. Almost the whole way the path was fairly wide and clear, being a "dēnei" or wild beast path; it was marked throughout by elephant tracks, and occasionally we came upon another diverging track, shewing the recent passage of elephants by its newly broken boughs and fresh fallen leaves scattered about. The vegetation was luxuriant, ferns, lycopodiums and various plants with handsome leaves in many places completely covering the ground; I noticed a standard variety of lycopodium rising as high as the waist. The Âyēr Jamban is a tributary of the Sēdili, and is large and deep enough to be useful were it cleared of obstructions. From a hill not far off, the *Jakuns* procured a good supply of *dān pāyong* (or umbrella leaves) to roof their huts with for the night, but I noticed that, like those in the *kampung* at Kwāla Mādek, they were much smaller than the variety growing on Gūnong Mēntahak, and so, I gathered, were all the *dān pāyong* in this part of the country. Six hours'

more walking next day (9th) brought us to Pěngkalan Těbā, (the *Jakun* kampong at the head of the Lěnggiu river) which we found almost deserted, the bulk of the able-bodied of the *kampong* having been transported to Kōta Tinggi, to make a road thence to Gūnong Panti for the convenience of coffee planters who were intending to try their luck there, after favourable reports by explorers from Ceylon. Having, so far, no boat at our disposal, we were compelled to wait at Pěngkalan Těbā till one could be procured from Tunku, a new settlement of rattan-collectors a little way down the Lěnggiu, so I spent the next day (10th) in the ascent of Bukit Pūpur (1,350 feet), the high hill behind the house of the Bātin. The way at first lies on the path to the Mādek, but soon leaves that on the left, and shortly becomes less smooth; at the last, just short of the summit, is a perpendicular wall of rock, which has to be climbed by the help of roots and tree stems; on these rocks grow small plants with beautifully marked and tinted leaves; the ferns were conspicuous by their absence. The rocks on this hill were a blue granite, said by Mr. HILL to resemble that found in Ceylon, and a rather soft sandy-brown sandstone, with red streaks, disposed to come away in lamina. Near the summit both tiger and rhinoceros tracks were observed. The top was covered with too dense a growth of trees to allow of any clear view, but I was able to get a glimpse in a South direction of what were no doubt the two peaks of Gūnong Pālei. CHE MUSA climbed a high tree on the western edge, and saw several hills North of West, which I took to be the ridges of Pěninjau and Pěsčlangan, but he then went on to describe clearings as existing near the foot of these; all, however, knowing that there was no cultivation going on in that part of the country by Europeans, Malays, or natives of any race, it was unanimously agreed that this must be the work of the *črang būnyian*. It occurred to me, that perhaps these might be the beginning of Mr. WATSON's clearings on the slopes of Gūnong Būnang near the mouth of the Bātu Pahat.

The *julor* having been prepared, we started down the river next morning (the 11th) and reached Singapore on the evening of the 14th, soon after dark, having changed boat twice on the way, once at Sěluang, and again at Kōta Tinggi, where CHE HUSEN, the officer in charge of Sěluang (being here to supervise the arrangements for

the reception of the Mahārāja) kindly handed me over his *gébeng* to take me to Singapore. The rockiness of the river-banks between Pěngkalan Těbā and Sěluang was quite a feature in the scenery on this trip down the stream. On my previous trip (returning from Blūmut) they were all concealed by the floods. On the banks of the Lěnggiu I found growing in one place a quantity of dwarf bambu and a very graceful fern [*Polypodium (dipteris) bifurcatum?*]. Bātu Hampar was quite bare this time, and was surrounded with sticks bearing bits of white cloth, placed by these who had paid their vows there. I stopped a short time at Panti to talk with the Bātin Tuha (of Pěngkalan Těbā *Jakuus*), who was lodging there, but could get nothing out of him; the presence of so many strange Malays seemed to tie up his tongue, but he was pleased to see me again.

The new godown at Kōta Tinggi commands a very good view of Gūnong Panti, the site is an eminence above the river, the centre, no doubt, of the old *kōta*; round its base is a creek which used to be the *pārīt* or moat, the southern end of which joins the main river, while the other probably communicates with Sungei Pěmandian. At Panchur, where I also touched on my way down the river, the high bank, which affords such a pretty view of the river and more distant scenery, is the site of an old fort, traces of where the guns were placed are still visible, but part of the site is now used as a burial ground. Very fine specimens of iron ore are occasionally washed out from under the banks at the landing place.



WITH THEIR TRIBUTARIES.

BY

August and September 1879



ITINERARY FROM SINGAPORE TO THE SOURCE OF THE SĔMBRONG AND UP THE MÂDEK.



AFTER leaving Singapore, the first point we passed was Tanjong Ramênâ (¹) (commonly known as Romania Point) or Pênysok, which we reached in five and-a-half hours; shortly after, we passed Pâlau Lîma, not far from which could be seen the wreck of the "Kingston." "Here," said the men, "many vessels are wrecked."

At Sungei Punggei (²) we were detained by a strong squall. Two hours up this river is a Chinese gambier plantation. Before reaching Tanjong Lâman, the next noticeable promontory, the striking peak of Pâlan Tinggi comes into view, bearing about 70° from Tanjong Tênggâroh, the next headland. Two hours further on is the mouth of Sungei Mërësing (³), and just beyond it lies Tanjong Sëtindan. (⁴) From here Pâlan Tiôman (⁵) can be well seen, and at daybreak I had a beautiful view of it, with its wonderfully fantastic peaks raising high their sombre-tinted heads above the fleecy veil which concealed its base. It is strange that so little is known of this grand island, which, unlike most of the neighbouring

(¹). "Ramênâ" or more commonly "Runânâ" is a fruit used as a pickle by the Malays, either in the *achar* or the *jêruk* form.

"Sûsok" to clear jungle the first time, or perhaps from "sûsor mênysûsor" to skirt the shore in a boat.

(²). "Punggei," a tree, the wood of which is used in boat and house-building, and the bark for flooring.

(³). "Mërësing," smelling offensively.

(⁴) "Sëtindan," a row, a series.

(⁵). Tiôman was given to Dâek or Lingga, so it is said, by the Râja of Pahang, who married the former's daughter, as *amâs kâcin*, and the name is fancifully derived from "timbangan."

formations, consists chiefly of trap rock. It is well worth a visit, both from the artist's and the naturalist's point of view. A full account of it is still a desideratum, M. THOMSON's visit in 184— having been but a hasty one.

The fine succession of rocky points, which bear the name of Tanjong Sētindan, are a striking feature in the scenery of the coast line, which is characteristically terminated by the bold rock known as Bâtu Gajah (Elephant Rock). In the centre of the bay which succeeds Tanjong Sētindan is a remarkable row of wooded cliffs, which stand out like ramparts beyond the line of the bay. A few miles further on, the sea is studded with various islets, which lie off the mouth of the Endau. The chief of these, as a watering-place, is Pâlau Achoh, a little gem of an island, rising abruptly some 150 to 200 feet from the sea, with its spring of clear water, its luxuriant vegetation, and peculiar-looking rocks, some orange, and some chocolate-tinted, others of a whitish shale, traversed here by bands of yellowish-grey quartz, there by bands of iron oxide, the junction of the two being signalled by the appearance of glittering crystals. The islands to the left, on proceeding to the Endau, were: Pâlau Këban, Pâlau Tâdong Këban⁽¹⁾, Pâlau Ujul⁽²⁾, Pâlau Pënyâlong⁽³⁾, Pâlau Lâlang⁽⁴⁾, and Pâlau Këmpit⁽⁵⁾; to the right was Pâlau Lâyak⁽⁶⁾.

(1). "Këban," work basket. "Tâdong Këban," work-basket lid.

(2). Said to be like a fruit of that name in shape.

(3). Cock-fighters' island, "Sâlong," "Menyâlong," to cock-fight. The pirates used to come and cock-fight here. On shore, near this island, is Prigi China, a well made by Chinese *seangkang* crews on their way to Singapore.

(4). "Lâlang," the wild grass which overruns all clearings left to themselves. This island, says the old legend, issued originally from the river Tërîang Bësar hard by, in the form of a huge crocodile, and was turned into an island when it reached its present position.

(5). This island is a *krâmat*, a sacred spot where vows are registered and prayers offered up. Tradition relates that Këmpit and his six brothers, while anchored off Pirgang were drawn out to sea by rough weather, and their boat was capsized; they all perished, and on the spot where the fatal accident happened arose the island of Këmpit.

(6). Lâyak, a fibrous climbing plant, the trailers of which are used for string.

The following list gives the names of all the places up the Endau River. The abbreviations are:—

S. for Suungei; Tg. for Tanjong; P. for Pâlau; T. for Têluk;
G. for Gûnong; Bt. for Bukit; K. for Kampong; B. for Bâtu;
Kw. for Kwâla; Pn. for Pêngkâlan; L. for Lûbok.

Right bank:—

Three-quarters of a mile up Pâdang (Police Station here): S. Guantan Kêchil, S. Guantan Bêsar, S. Nior (source behind Pâdang Station), S. Bêsut ⁽¹⁾, S. Sêmâloi, S. Ngang (one hour's ascent), K. and Bt. Brûang, T. Gôdaug, T. Âpit, B. and S. Lâbong (latter one day's ascent), Tg. Kêrlîh, Dâsun Tinggi, T. Nibong Pâtal, T. Jêjâwi (here begins Rantan Panjang, and a fine long reach it is), T. Dangkil, Rantan Ranggam ⁽²⁾, S. Pêlâjar ⁽³⁾ (half-an-hour's ascent), S. Bârau ⁽⁴⁾ (half-an-hour's ascent), S. and T. Pâlas ⁽⁵⁾. T. B. Pâtih, S. Têrsap ⁽⁶⁾ (two days' ascent, source at Tânah Abang), Bt. Jûrak, S. Jûrak (half-an-hour's ascent), T. Bêrang ⁽⁷⁾, S. Pêlâwan ⁽⁸⁾ (half-an-hour to Tânah Abang), S. Pâsir (a small creek leading to Tânah Abang: tin used to be worked here), S. Bong Lei ⁽⁹⁾ (to Tânah Abang, and to other old tin-workings).

Left bank:—

Tg. Gêmuk, Tg. Mâlang Gâding, S. Anak Endau (three days'

(1). "Bêsut," to strike.

(2). "Ranggam," a shrub with a short stem, like the "Sâlak," and leaves resembling those of the cocoa-palm, hard brown fruit, eaten both ripe and unripe with salt.

(3). "Pêlâjar," a tree, giving from the stem an oil which is used for *sakit losong*, a disease causing white spots.

(4). "Bârau-bârau," is perhaps the finest singing-bird in the Peninsula. "Sêbârau" is a fish. Bârn, a shrub on sea-shore from which rope is made, it has a yellow flower.

(5). "Pâlas," that curious plant, the leaves of which are used by Malays for the covering of their *roko*, and do not terminate either in a curve or a point, but look as though their ends had been chopped off, leaving a straight saw-like edge.

(6). "Têrsap" = "lêsap," to disappear, used of losing the path, or of anything disappeared from its place.

(7). "Bêrang," a tree bearing a fruit which is eaten when fried.

(8). "Pêlâwan," a very hard wood, used for making oars and paddles.

(9). "Bong Lei," a variety of ginger.

ascent, source at Bt. Këndok, (1) a fine hill visible from the mouth of Endau just North of G. Jāning (2), which latter bears about 5° N. of S. W., from the mouth of Endau), twenty minutes further on formerly K. Tambang, S. Lantang (3), a quarter of-an-hour higher K. Pianggu (4) (residence of СнѢ БѢКУ ДА, nephew of the Bëndahāra of Pahang), Olak (5) Gol (6) a broad bend, one and-a-quarter hours higher T. Rēdang (7), S. Kēsik (8), S. Johor (one hour's ascent), S. Kēmčntas (three hours' ascent), Tunjang Pelandok (9), T. Tungku Bēlinggang, S. Nangka (half-an-hour's ascent), S. Kambar (two days' ascent, source at Bt. Këndok), Guntong (10), S. Buāya (one hour's ascent, course parallel with Endau), S. Mēntēlong (two days' ascent, source in a swamp behind Bt. Këndok), T. Kāpar (11) (from T. Dangkil, right bank, to this one great bend: this was the execution place in the time of the grandfather of the present Bëndahāra), T. Lārak (12), Rantan Bā-

(1). "Këndok" a grass.

(2). In wet seasons, an anchor with a rope is said to appear to prevent this mountain being carried away.

(3). "Lantang," clear, open, nothing in sight.

(4). "Pianggu," a tree bearing an edible but very astringent fruit, which, with the shoots, is used with salt and chili as a *sambal*.

(5). "Olak," ripple, or agitation.

(6). "Gol," sound of head-knocking, fish-biting.

(7). A tree with wide leaves and fine branches. "Rēdan" a tree with edible fruits like rambutan, but without the bristles: wood useful.

(8). "Kēsik-kēsik," used of whispering or any small noise.

(9). "Tunjang," hoof marks, but it means literally anything raised above the surface; this is the place whence a *pelandok* started in flight on being chased, and is celebrated in *pantuns*, for instance:—

کونڤه جانينغ تمڤق ملتڤ تمڤق دري تجورڤ فلندوق

فوتہ کونينغ شگول ترلنتڤ تمڤت بوجڤ برسندر مابوق

(10). A creek.

(11). "Kāpar," or "Kēpar" as it is elsewhere called, is a curious-looking stumpy palm, not rising above twenty-five feet in height; it is not very common. "Kāpar" also means scattered about, perhaps referring to snags in the stream.

(12). "Lārak" an "akar," or monkey-rope, giving forth on being tapped a rather green-flavoured water. "Lārak" also means close together, as the seeds of a dūrian, without much pulp.

nyian (¹), Râsau Bâsu, Tg. Tâan (a *krâmat*), Olak Bëndahâra (in ten minutes right Kw. Sêmbrong Station), S. Êndau Mâti (which ends in the *râsau* near the Station; this was the old course of the Êndau confluent before it cut its way through the *tanjong* and took its present course). Reach Station twenty minutes after sighting it.

20th August.—(For Hûlu Sêmbrong)—We passed on the right bank the following places:—

S. Iênggor (²), Pn. Lanjut (³), S. Nior (⁴), Pn. Kijang (⁵).

Left bank:—

S. Lênga (one day's ascent, four or five *Jakun* houses,) Pn. Dênei (⁶), L. Tâlam (⁷).

The 21st we passed the following places:—

Right bank:—

P. Bukit, Kêliling Sêlat (extensions of the stream enclosing islands; the meaning is, if you go round it is but a strait), P. Mâti Anak (a small lump sticking up in the stream, said to be floating whatever the state of the river, so named from the death of a Malay child at its birth), S. Têbang Kâsing (⁸) (one and-a-half

(¹). *i.e.*, "Rantau Orang Bûnyian," or the reach of the invisible folk. This is a race of beings held to live like the rest of the world, but apart from and invisible to them; though they are to be seen occasionally, but only to disappear if sought for. They are said to possess this power from invariably speaking the truth; they only live in the jungle.

(²). There are some *Jakuns* up this river, whence there is a pathway to the Sêlîli Bêsar, and, I believe, to the Mâlek.

(³). "Lanjut" is a tree, the fruit of which is in much favour with Malays.

(⁴). "Nior," cocoa-nut tree, a sign of former occupation.

(⁵). "Kijang," a deer about the size of a goat.

(⁶). This word "dênei" is used for a mountain pass or gully, but also, and particularly in this part of the country, seems to be used of the well-worn tracks of the wild beasts of the jungle, which usually lead to water, and are freely used by the collectors of jungle produce.

(⁷). "Tray hole," where some one lost his tray in the water, or from its shape.

(⁸). A tree, useful to the carpenter.

days' ascent), L. Mak Sěnei, Pn. Pělēpah⁽¹⁾ (sago-palm leaves procured here), L. Sělam Bědil or Měriam (here, it is said, was sunk a piece of cannon in the time of Kûris, Râja of Pahang), L. Pěnyû (turtle-hole), T. Pělēpah⁽¹⁾ (a broad deep bay, conjecturally 800 yards by 100, narrowing at the finish), S. Kahang⁽²⁾ (the Mâdek is a tributary of this river).

Left bank:—

S. Sělondek, S. Atap Lâyar, L. Pongkor, S. Bârang, P. Gâgak (crow landing-place), S. Hârus Dras (swift current river).

22nd. Left bank:—

The *trúsan* (channel junction with main stream) of S. Hârus Dras, Jěbul Kědah, Pâloh⁽³⁾ Měngkwang, other end of Jěbul Kědah, Chědang Dûa (*Jakun* for Châbang dûa, or the bifurcation where S. Hârus Dras leaves the Sěmbrong [2nd S. Hârus Dras?]). Pâsir Kijang, S. Kěmbar, S. Bětok⁽⁴⁾ (used to be a *kampung* of 20 *Jakuns* here 10 years ago), S. Banteian⁽⁵⁾.

Right bank:—

S. Běhei, P. Biûku (a variety of tortoise), Dânu Mîang (the itching lake; whether this referred to the water, mud, or some weed, I did not learn), L. Dinding Pâpan (this would naturally mean the plank-walled hole, and may be supposed to refer to an artificially constructed bathing-place for a Râja in former days), S. Kěmbar (flows into Sěmbrong just opposite river of same name on the other bank, hence the name, the "twin streams").

23rd. Left bank:—

S. Sěngkar⁽¹⁾ (up which we proceed, as being easier to get through than the Sěmbrong), S. Sěhlel (back into the Sěmbrong in about 50 minutes from start); large clearing, formerly *Jakun* padi-land), S. Tâmok, B. Jâkas (a variety of *měngkwang*), then

(1) "Pělēpah," this word signifies the branch-leaf of trees of the palm-kind, plantain and cocoa-nut trees, &c.

(2) Strong-smelling, next to "Měřsing."

(3) A hollow in the bed of the sea, or a hollow on land filled with water.

(4) A fish.

(5) "Bantei," to strike; "banting," to take up and dash down.

(6) A cross bar connecting the ends of the *gâding* in a boat.

rásau islets, Pàloh Kôchek ⁽¹⁾ (*Jakun* settlement), S. Měngkēlah (a fish), L. Lěsong (mortar hole), S. and Pn. Pondok ("pondok," hut) (a *Jakun* settlement).

Right bank :—

An hour after coming back into the Sěmbrong, L. Pâsar, Pàloh Tampui ("tampui," an edible fruit like the manggostin in construction, but light-brown in colour); three *Jakun* huts shortly after; an hour later, Kumbang (a *Jakun* settlement), Pn. Pô-mang ⁽²⁾.

24th. Right bank :—

L. Chông ⁽³⁾, S. Pěsôlot ⁽⁴⁾, S. Ayěr Râwa ⁽⁵⁾.

Left bank :—

P. Děndang ⁽⁶⁾, Londang ⁽⁷⁾, Pn. Kěnlâu (the chief *Jakun* settlement on the Sěmbrong).

25th. Left bank :—

S. Bětong ⁽⁸⁾, S. Mělětir ⁽⁹⁾ (this is really the Sěmbrong, the stream we ascend now being S. Kělambu), Pn. Tongkes ⁽¹⁰⁾.

2nd September. (From Kwâla Kahang).

Right bank :—

S. Songsang Lanjut, Pârit Siam (the Siamese moat), K. Těbang Said (the *kampung* cleared by the Said), Kubbâr Dâto' Said ⁽¹¹⁾ (the tomb of Dâto' Said), Kw. Mâdek.

4th. (Ascending Kahang.)

Right bank :—

Trâsan or channel from Kahang leading into Mâdek, which we

⁽¹⁾ "Kochek," pocket.

⁽²⁾ "Pomang," a wood used for general purposes.

⁽³⁾ "Chông," a useful wood.

⁽⁴⁾ "Pěsôlot," a creek, shorter than *guntong*.

⁽⁵⁾ "Râwa," a tree producing edible fruit and a fine wood.

⁽⁶⁾ "Děndang," a crow. Tradition relates that a Bugis vessel thus named was here changed into an island.

⁽⁷⁾ "Londang," a larger "Pàloh."—12 years ago this was a thriving settlement, but is now deserted.

⁽⁸⁾ A variety of bambu.

⁽⁹⁾ A tree used for firewood.

⁽¹⁰⁾ A tree used for firewood.

⁽¹¹⁾ He is said to have been a Siamese turned Mahomedan.

enter, leaving Kahang on right, and, after entering Mâdek in 20 minutes, pass the following places:—

Tampui Mambong (a creek) (i.e. the empty tampui fruit), Pn. Dûrian, S. Kûchang, S. Kladi Mèrah (bank bright red clay here), Padang Jërkeh.

Left bank:—

S. Jërang Blanga, S. Kêmâtir (one day's ascent). The half-hour's course up to this point is one long reach called Rantan Kêmâtir.

5th. Right bank:—

S. Chërlang, S. Sol Nyungsan, B. Kûan, (argus-pheasant hill), S. Lësong (here begins Rantau To' Oh), S. and B. Sërdang (a fine palm with grand leaves forming capital temporary thatch.)

Left bank:—

Pâloli Râneh, Pn. To' Oh, S. Junting, S. Rëndum Sëligi.

6th. Right bank:—

L. Këpong (the hole surrounded or fenced in), S. Blat ("blat," a weir), S. Lëmêmet.

7th. Left bank:—

S. Mëdang,⁽¹⁾ Dânu Chëruk (the lake in the corner), Chëndia Bëmban (in *pantang kâpur* "chëndia" means house, hut; "bëmban" is a tree with hollow stem containing pith; a lotion for the eyes is made from its buds).

Right bank:—

Gantong lambei (hanging signal, "lambei," to beckon), Pn. Bëmban (opposite Chëndia Bëmban).

(¹) "Mëdang," a tree, of which there are several varieties used in carpentering.

PETARA, OR SEA DYAK GODS.

BY

THE REV. J. PERHAM.



PETARA, otherwise *Betara*, is, according to MARSDEN, Sanskrit, and adopted into Malay from the Hindu system, and applied to various mythological personages; but whatever be its meaning and application in Malay, in Sea Dyak—a language akin to Malay—it is the one word to denote Deity. *Petara* is God, and corresponds in idea to the *Elohim* of the Old Testament.

But to elucidate the use of the term, we cannot turn to dictionary and treatises. There is no literature to which we can appeal. The Sea Dyaks never had their language committed to writing before the Missionaries began to work amongst them. For our knowledge of their belief, we have to depend upon what individuals tell us, and upon what we can gather from various kinds of *pengap*—long songs or recitations made at certain semi-sacred services, which are invocations to supernatural powers. These are handed down from generation to generation by word of mouth; but only those who are curious and diligent enough, and have sufficiently capacious memories, are able to learn and repeat them; and, as may be expected, in course of transmission from age to age, they undergo alteration, but mostly, I believe, in the way of addition. This tendency to change is evident from the fact that, in different tribes or clans, different renderings of the *pengap*, and different accounts of individual belief may be found. What follows in this Paper is gathered from the Balau and Saribus tribes of Dyaks.

A very common statement of Dyaks, and one which may easily mislead those who have only a superficial acquaintance with them and their thought, is that *Petara* is equivalent to *Allah Taala*, or

Tuhan Allah. "What the Malays call *Allah Taala*, we call "*Petara*" is a very common saying. And it is true in so far as both mean Deity; but when we investigate the character represented under these two terms, an immense difference will be found between them, as will appear in the sequel. What *Allah Taala* is, we know; what *Petara* is, I attempt to show.

I have not unfrequently been told by Dyaks that there is only one *Petara*, but I believe the assertion was always made upon very little thought. The word itself does not help us to determine either for monotheism or for polytheism, because there are no distinct forms for singular and plural in Sea Dyak. To us the word looks like a singular noun, and this appearance may have suggested to some that Dyaks believe in a hierarchy of subordinate supernatural beings with one God—*Petara*—above all. I have been told, indeed, that, among the ancients, *Petara* was represented as:—

Patu, nadai apai
Eudang nadai indai.

An orphan, without father,
Ever without mother.

which would seem to imply an eternal unchangeable being, without beginning, without end. And this idea is perhaps slightly favoured by a passage in a *pengap*. In the song of the Head Feast, (1) the general object of the recitation is to "feteh," that is, invoke the presence of, *Singalang Burong* at the feast, and certain messengers are lauded, who carry the invitation from the earth to his abode in the skies. Now these are represented as passing on their way the house of *Petara*, who is described as an individual being, and who is requested to come to the feast. There may be here the relic of a belief in one God above all, and distinct from all; but this belief, notwithstanding what an individual Dyak may occasionally say, must be pronounced to be now no longer really entertained.

The general belief is that there are many *Petaras*; in fact, as many *Petaras* as men. Each man, they say, has his own peculiar *Petara*, his own tutelary Deity. "One man has one *Petara*,

(1) *Straits Asiatic Journal*, No. 2, p. 123.

"another man another"—*Jai orang jai Petara*. "A wretched man, a wretched *Petara*," is a common expression which professes to give the reason why any particular Dyak is poor and miserable—"He is a miserable man, because his *Petara* is miserable." The rich and poor are credited with rich and poor *Petaras* respectively, hence the state of Dyak gods may be inferred from the varying outward circumstances of men below. At the beginning of the yearly farming operations, the Dyak will address the unseen powers thus: *O kita Petara O kita Ini Inda*—"O ye gods, "O ye *Ini Inda*." Of *Ini Inda* I have not been able to get any special account; but from the use of *Ini*, grandmother, it evidently refers to female deities; or it may be only another appellation of *Kita Petara*. Now, little as this is, it is unmistakeable evidence that polytheism must be regarded as the foundation of Sea Dyak religion. But the whole subject is one upon which the generality of Dyaks are very hazy, and not one of them, it may be, could give a connected and lucid account of their belief. They are not given to reasoning upon their traditions, and when an European brings the subject before them, they show a very decided unpreparedness.

The use of the term *Petara* is sufficiently elastic to be applied to men. Not unfrequently have I heard them say of us white men: "They are *Petara*." Our superior knowledge and civilization are so far above their own level, that we appear to them to partake of the supernatural. It is possible, however, that this is merely a bit of flattery to white men. When I have remonstrated with them on this application of the term, they have explained that they only mean that we appear to manifest more of the power of *Petara*, that to themselves, in what we can do and teach, we are as gods. Mr. Low, in his paper on the Sultans of Bruni, ^(*) tells us that it was the title of the rulers of the ancient kingdoms of Menjapahit and Sulok. It is not uninteresting to compare with this the application of the Hebrew *Elohim* to judges, as vice-gorents of God. (Psalm LXXXII. 6.)

But some of the *pengap* will tell us more about *Petara* than can be got from the conversation of the natives, and the first

(*) Straits Asiatic Journal, No. 5, pp. 1-16

which I lay under contribution is the *pengap* of the *Besant*, a ceremony which is performed over children, and less frequently over invalids, for their recovery. It is much in vogue amongst the Balas, but seldom resorted to, I think, by the other clans of Sea Dyaks. Like all Dyak lore, it is prolix in the extreme, and deluged with meaningless verbosity. I only refer to such points in it as will illustrate my subject.

The object of the *Besant* is to obtain the presence and assistance of all *Petaras* on behalf of the child—that he may become strong in body, skilful in work, successful in farming, brave in war, and long in life. This is about the sum total of the essential significance of the ceremony. The performers are *manangs*, medicine men, who profess to have a special acquaintance with *Petaras* above, and with the secrets of Hades beneath, and to exercise a magic influence over all spirits and powers which produce disease among their countrymen. The performer then directs his song to the *Petaras* above, and implores them to look favourably upon the child. Somewhere at the commencement of the function, a sacrifice is offered, when the *Manangs* sing as follows:—

Raja Petara bla ngemata,

Seragendah bla meda,

Ngemeran ka subak tanah lang.

Seragendi bla meda,

Ngemeran ka ai mesei puloh grunong sanggang.

Seleledu bla meda,

Ngemeran ka jumpu mesei jugu bejampong lempang.

Seleleding bla meda,

Ngemeran ka tinting lurus mematang.

Silingiling bla meda,

Ngemeran ka pating sega nsluang.

Sengungong bla meda,

Ngemeran ka bungkong mesei benong balang.

Bunsu Rembia bla meda,

Ngemeran ka jengka tapang bedindang.

Bunsu Kamba bla meda,

Ngemeran ka bila maram jarang.

Kings of Gods all look.

Seragendah who has charge of the stiff, clay earth.

Seragendi who has charge of the waters of the Hawkbell Island.

Seleledu who has charge of the little hills, like *topnots* of the *bejampong* bird.

Seleleding who has charge of the highlands straight and well defined.

Selingiling who has charge of the twigs of the *sega* rotan.

Sengungong who has charge of the full grown knotted branches.

Bunsu Rembia Abu who has charge of the bends of the widespreading *tapang* branches.

Bunsu Kamba equally looks down, who has charge of the plants of thin *maram*.

All these beings are entreated to accept the offering. And these Royal *Petaras* are by no means all whose aid is asked. Others follow :—

Bemata Raja Petara bla ngelala sampol nilik.

Ari remang rarat bla nampai ngijap, baka keempat kajang sabidang.

Ari pandau banyak ⁽¹⁾ *bla nampai Petara Gnyak baka pantak labong palang.*

Ari pintau kamarau sanggan, bla ngilan Petara Radau baka ti olih likau nabau bekenggang.

Ari dinding ari bla nampai maremi Petara Menani, manah mati baka kaki long tetukang.

Ari bulan bla nampai Petara Tebaran, betempan kaki subang.

Ari mata-ari bla maremi Petara kami manah mati, baka segundi manang begitang.

Ari jerit tisi langit bla nampai Petara Megit, baka kepit tanggi tudong temelang.

Ari pandau bunya Petara Megu bla nampai meki langgu katunsong laiang.

The Royal *Petaras* having eyes, all recognise, altogether look down.

From the floating cloud, like an evenly cut *kajang*, they all look and wink.

(1) This word is probably a comparatively late importation. "Maiol?" is Dyak for "many."

From the Ploïades ⁽¹⁾, like the glistening patterns of the long flowing turbans, looks also *Petara Guyak*.

From the Milky Way ⁽²⁾, like golden rings of the nabau snake, *Petara Radau* is observing.

From the rainbow ⁽³⁾ also, beautiful in dying like the feet of an opened box, *Petara Menani* is looking and bending.

From the moon, like a fasting earring also, *Petara Tebaran* is looking.

From the sun beautiful in setting, like the hanging *segundi* ⁽⁴⁾ of the *manangs*, our *Petara* is bending down.

From the end of heaven, like the binding band of the *tanggi*, *Petara Megit* is looking.

From the evening star as big as the bud of the red hibiscus, *Petara Megu* is looking.

Odd and ludicrous as this is, in its comparison of great things with small, its teaching is very clear. As men have their personal tutelary deities, so have the different parts of the natural world. The soil, the hills, and the trees have their gods, through whose guardianship they produce their fruits. And the sun, moon, stars, and clouds are peopled with deities, whose favour is invoked, whose look in itself is supposed to convey a blessing.

But these *Petaras* are very human-like gods; for they are represented as making answer to the supplications of the *manangs*—“How shall we not look after and guard the child, for next year ⁽⁵⁾ you will make us a grand feast of rice and pork, and fish, and “venison, cakes and drink:”—carnal gods delighting in a good feed, such as the Dyaks themselves keenly appreciate.

In this way the attention of these *Petaras* is supposed to have been aroused, and a promise to undertake the child's welfare obtained. At this point, according to the assertions of the *manangs*,

(1) Literally: “the many stars,” *i.e.*, many in one cluster.

(2) Literally: “the high ridges of long drought.”

(3) “Dinding ari,” “protection of the day,” is a small part of the rainbow appearing just above the horizon. The whole bow is called “Anak Raja.”

(4) “Segundi,” a vessel used by the *manangs* in their incantations on behalf of the sick.

(5) This refers to the concluding half of the ceremony which is performed at some subsequent times.

the *Petaras* from some point in the firmament shake their charms in the direction of the child :—

“ Since we have looked down,

“ Come now, friends,

“ Let us, in a company, wave the medicine charms.”

And so they wave the shadow of their magical influence upon the child.

But there are still more *Petaras* to come :—

Pupus Petara kebong langit,

Niu Petara puchok kaiyu.

Having finished the *Petaras* in mid-heavens,

We come to the *Petaras* of the tree-tops.

And they sing of the gods inhabiting trees, and among these are monkeys, birds, and insects, or spirits of them. From the trees they come to the land :—

Pupus Petara puchok kaiyu,

Nelah Petara tengah tanah.

Having finished the *Petaras* of the tree-tops,

We mention the *Petaras* in the midst of the earth.

In this connection, many more *Petaras* are recounted.

But the *Besant* tells something more than the number and names of gods. The whole function consists of two celebrations, the second of which takes place at an interval of a year, and sometimes more, after the first. In the first part, the *Petaras* are “brought” to some point in the firmament, or it may be, to some neighbouring hill, from which they see the child. In the second, they are “brought” to the house where the ceremony is being performed, in order to leave there the magic virtue of their presence. A large part of the incantation is the same in both; and at a certain part of the second the *Petaras* are represented as saying :—

“ Before we have looked down,

“ Now a company of men are inviting us to the feast.”

And in compliance with the invitation, they prepare for the journey earthwards. The female *Petaras* are described, at great

length, as putting on their finest garments and most valuable ornaments—brass rings round their bodies, necklaces of precious stones, earrings and head decorations, beads and hawkbells, and everything, in short, to delight feminine taste and beauty. Then the male *Petaras* do the same, and equip themselves with waist-cloth, coat and turban, and brass ornaments on arms and legs. A start is then made with several of the goddesses, renowned for their knowledge of the way as guides, to lead the way; but these prove to be sadly at fault, for, after going some distance, they find the road leads to nowhere, and they have to retrace their steps, and go by way of the sun and moon and stars; and from the stars they get at some peculiar grassy spot, where they find a trunk of a fallen tree down which they walk to our lower regions. Here they sing how these *Petaras* from the skies are joined by all the *Petaras* of the hills and trees and lowlands, and by *Salampandai*: and then all together, in one motley company, they wend their way to the house where the *Besant* is being made. Just as a Dyak would bathe after coming from a long walk, so these gods and goddesses are described as bathing, and their beauty descanted upon. Their approach to the house I pass over, but just before going up the ladder into it, the elder *Petaras* think it necessary to give a moral admonition to the whole company:—

Ka abi rumah anang meda;

Unggai ka ngumbai ngiga serenti jani.

Ka galenggang anang nentang;

Unggai ka ngumbai ngiga tugang manok laki.

Ka ruai anang nampai;

Unggai ka ngumbai ngiga laki.

Ka bilik anang nilik;

Unggai ka ngumbai ngiga tajau menyadi.

Ka sadau anang ngilau;

Unggai ka ngumbai ngiga padi.

To the space under the house do not look;

Lest they should think you seek a pig's tusk.

To the henroost do not sit opposite;

Lest they should think you seek a tail feather of the fighting cock.

To the verandah do not cast your eyes;

Lest they should think you are seeking a husband.

Into the room do not peep;

Lest they should think you are seeking a jar.

To the attic do not look up;

Lest they should think you are seeking rice.

After this they are supposed to enter the house, of course an invisible company; and to partake of the good things of the feast together with the Dyaks, gods and men feeding together in harmony. After all is over they return to their respective abodes.

It is a miserable, low and earthly conception of God and gods; hardly perhaps to be called belief in gods, but belief in beings just like themselves: yet they are supposed to be such as can bestow the highest blessings Dyaks naturally desire. The grosser the nature of a people, the grosser will be their conception of deities or deity. We can hardly expect a high and spiritual conception of deity from Dyaks in their present intellectual condition and low civilization. Theirs is a conception which produces no noble aspirations, and has no power to raise the character; yet it has a touching interest for the Christian student, for it enshrines this great truth, that man needs intercommunion with the Deity in order to live a true life. The Dyak works this out in a way which most effectually appeals to his capacities and sympathies.

I turn now to a *sampi*, an invocation often said at the commencement of the yearly rice-farming; in other words, a prayer to those superior powers which are supposed to preside over the growth of rice. First of all, *Pulong Gana* is invoked; then the Sun, who is called *Datu Patinggi Mata-ari*, and his light-giving, heat-giving influence recounted in song. After the Sun comes a bird, the *Kajira*; then the padi spirit (*Saniang Padi*), then the sacred birds, that is, those whose flight and notes are observed as omens; all these are prayed to give their presence. Leaving the birds, the performer comes to *Petara* "whom he also calls, whom he also "invokes." "What *Petara*," it is asked, "do you invoke?" The answer is: "*Petara* who cannot be empty-handed, who cannot be "barren, who cannot be wrong, who cannot be unclean;" and thereupon follow their names:—*Sanggul Lebong, Pinang Ipong*,

Kling Bungai Nuiying, Laja Bungai Jawa, Batu Imu, Batu Nyantau, Batu Nyantar, Batu Gawa, Batu Nyanggak, Nyawin, Jamba, Pandong, Kendawang, Panggau, Apai Mapai, Kling; each from his mythical habitation "come all, come every one; without "stragglers, without deserters." And this call of the sons of men is heard, and the *Petaras* make answer: "Be well and happy, ye "sons of men living in the world."

"You give us rice,

"You give us cakes;

"You give us rice-beer,

"You give us spirit;

"You give us an offering,

"You give us a spread.

"If you farm, all alike shall get padi.

"If you go to war, all alike shall get a head.

"If you sleep, all alike shall have good dreams.

"If you trade, all alike shall be skilful in selling.

"In your hands, all alike shall be effective.

"In just dealing, all alike shall have the same heart.

"In discourse, all alike shall be skilful and connected.

Then, leaving this company of *Petaras*, the *sampi* proceeds to invoke in a special manner one particular *Petara*, of whom more is said than of all the proceeding. This is *Ini Andan Petara Buban*—Grandmother *Andan*, the grey-haired *Petara*." Her qualities are complete. "She has a coat for thunder and heat; she "is strong against the lightning, and endures in the rain, and is "brave in the darkness. To cease working is impossible to her. "In the house her hands are never idle, in talking her speech is "pure, her heart is full of understanding. And this is why she is "called, why she is beckoned to, why she is offered sacrifice, why "a feast is spread." She can communicate these powers to her servants. Moreover, they would obtain her assistance as being "the chief-keeper of the broad lands and immenses, where they "may farm and fill the padi bins; the chief-keeper of the long "winding river, where they may beat the strong *tuba* root; as "chief-keeper of the great rock, the parent stone, where they may "sharpen the steel-edged weapons; as chief-keeper of the bee-trees, where they may shake the sparks of the burning torches."

But to watch over the farm and guard it from evils is her special province; and for this her presence is specially desired.

"If the *mpangau* ⁽¹⁾ should hover over it, let her shake at them the sparks of fire.

"If the *bengas* ⁽²⁾ should approach, let her squeeze the juice of the strong tuba root.

"If the ants should come forth, let her rub it (the farm) with a rag dipped in coal-tar.

"If the locusts should run over it, let her douch them with oil over a bottle full.

"If the pigs should come near, let her set traps all day long.

"If the deer should get near it, let her kill them with bamboo spikes.

"If the mouse-deer should have a look at it, let her set snares all the day long.

"If the roe should step over it, let her set bamboo traps.

"If the sparrows should peck at it, let her fetch a little gutta of the *tekalong* tree.

"If the monkeys should injure it, let her fix a rotan snare.

"That there may be nothing to hurt it, nothing to interfere with it."

In answer to their entreaty, she replies in a similar way to the *Petaras* before mentioned, and pronounces upon them her blessings of success, prosperity and wealth, and skill, as a return for the offering made to her. And thus the Dyak thinks to buy his padi crop from the powers above.

Ini Andan, as she is preparing to take leave of her worshippers according to the *sampi*, bestows some charms and magical medicines, mostly in the form of stones, and afterwards gives a parting exhortation:—

"Hear my teaching, ye sons of men.

"When you farm, be industrious in work.

"When you sleep, do not be over-much slaves of the eyes.

"When people assemble, do not forget to ask the news.

(1) A kind of bug.

(2) A peculiar insect destructive to the young padi plants.

- " Do not quarrel with others.
- " Do not give your friends bad names.
- " Corrupt speech do not utter.
- " Do not be envious of one another.
- " And you will all alike get padi.
- " All alike be clean of heart.
- " All alike be clever of speech.
- " I now make haste to return.
- " I use the wind as my ladder.
- " I go to the crashing whirlwind.
- " I return to my country in the cloudy moon."

Traditionary lore and popular thought thus tell the same tale; the latter imagines the universe peopled with many gods, so that each man has his own guardian deity; and the former professes to put before us who and what, at least, some of these are. The traces of a belief in the unity of deity referred to at the beginning of this paper, is at most but a faint echo of an ancient and purer faith; a faith buried long ago in more earthly ideas. Yet even now Dyaks are met with who say that there is only one *Petara*; but when they are confronted with the teaching of the *pengap*, and with unmistakeable assertions of gods many, they explain this unity as implying nothing more than a unity of origin. In the beginning of things there was one *Petara* just as there was one human being; and this *Petara*, was the ancestor of a whole family of *Petaras* in heaven and earth, just as the first man was the ancestor of the inhabitants of the world. But this unity of origin does not amount in their minds to a conception of a First Great Cause; yet it is an echo of a belief which is still a silent witness to the One True God.

It has been said that "every form of polytheism is sprung from "nature worship." It is very clear that Dyak gods are bogotten of nature's manifold manifestations. *Ini Andan* seems a concrete expression of her generating producing power. The sun and moon, stars and clouds, the earth with its hills and trees and natural fertility, are all channels of beneficial influences to man, and the Dyak feels his dependence upon them; he has to conduct his simple farming subject to their operations; his rice-crop depends

upon the weather, and upon freedom from many noxious pests over which he feels little or no control—rats, locusts and insects innumerable; he gets gain from the products of the jungle, and loves its fruits: high hills surrounded with floating clouds, and the violent thunder storms, are regarded with something of mysterious awe; he must invoke these powers, for he wants them to be on his side in the weary work of life's toils, and the struggle for existence; and thus he imagines each phenomenon to be the working of a god, and worships the gods he has imagined.

I must now refer to three beings which have been mentioned before, and which occupy a peculiar position in Dyak belief, as holding definite functions in the working of the world. These are *Salampandai*, *Pulang Gana*, and *Singalang Burong*.

Salampandai is a female spirit, and the maker of men, some say by her own independent power, some by command of *Petara*. The latter relate that in the beginning *Petara* commanded her to make a man, and she made one of stone, but it could not speak and *Petara* refused to accept it. She set to work again and fashioned one of iron, but neither could that speak, and so was rejected. The third time she made one of clay which had the power of speech, and *Petara* was pleased, and said: "Good is the man you have made, let him be the ancestor of men." And so *Salampandai* ever afterwards formed human beings, and is forming them now, at her anvil in the unseen regions. There she hammers out children as they are born into the world, and when each one is formed it is presented to *Petara*, who asks: "What would you like to handle and use?" If it answer: "The *parang*, the sword and spear," *Petara* pronounces it a boy; but if it answer: "Cotton and the spinning wheel," *Petara* pronounces it a female. Thus they are determined boys or girls according to their own choice.

Another theory makes *Petara* the immediate creator of men, and of all things:—

"*Langit Petara dulu mibit,*
"*Mesei dunggul manok banda.*
"*Tanah Petara dulu ngaga,*
"*Mesei buah mbawang blanja.*

- " *Ai Petara dulu ngiri,*
 " *Mesei linti tali besara.*
 " *Tanah lang Petara dulu nenchang,*
 " *Nyadi mensia.*
 " *Petara first stretched out the heavens,*
 " *As big as the comb of the red-feathered cock.*
 " *The earth Petara first created,*
 " *As big as the fruit of the horse mango.*
 " *The waters Petara first poured out,*
 " *As great as the strands of the rotan rope.*
 " *The stiff clay Petara first beat out,*
 " *And it became man."*

But here *Petara* may be any particular being, and may include a multitude of gods. There are other theories of creation or cosmogony, but they cannot be examined here.

There are no special observances in direct honour of *Salampan-dai*. In the *Besant*, she is brought to be present along with the *Petaras*. But this great spirit, never, I presume, visible in her own person, is supposed to have a manifestation in the realm of visible things in a creature something like a frog, which is also called *Salampan-dai*. Naturally this creature is regarded with reverence, and must not be killed. If it goes up into a Dyak house, they offer it sacrifice, and let it go again, but it is very seldom seen. It is one with the unseen spirit. The noise it makes is said to be the sound of the spirit's hammer, as she works at her anvil. So intimate is the connection that what is attributed to the one, is also attributed to the other. The creature is supposed to be somewhere near the house, whenever a child is born: if it approaches from behind, they say the child will be girl; if in front, a boy. In this case we have an instance of direct nature worship, and it is not the only one to be found amongst the Dyaks.

Pulang Gana is the tutelary deity of the soil, the spirit presiding over the whole work of rice-farming. According to a myth handed down in some parts, he is of human parentage. *Simpang-impang* at her first accouchement brought forth nothing but blood which was thrown away into a hole of the earth. This by some mystical means, became *Pulang Gana*, who therefore lives in the

bowels of the earth, and has sovereign rights over it. Other offspring of *Simpang-impang* were ordinary human beings, who in course of time began to cut down the old jungle to make farms. On returning to their work of felling trees the second morning, they found that every tree which had been cut down the day before was, by some unknown means, set up again, and growing as firmly as ever. Again they worked with their axes, but on coming to the ground the third morning they found the same extraordinary phenomenon repeated. They then determined to watch during the following night, in order to discover, if possible, the cause of the mystery. Under cover of darkness *Pulang Gana* came, and began to set the fallen trees upright as he had done before. They laid hold of him, and asked why he frustrated their labours. He replied: "Why do you wrong me, by not acknowledging my authority? I am *Pulang Gana*, your elder brother, who was thrown into the earth, and now I hold dominion over it. Before attempting to cut down the jungle, why did you not borrow the land from me?" "How?" they asked. "By making me sacrifice and offering." Hence, Dyaks say, arose the custom of sacrificing to *Pulang Gana* at the commencement of the yearly farming operations, a custom now universal among them. Sometimes these yearly sacrifices are accompanied by festivals held in his honour—the *Gawei Batu*, and the *Gawei Benih*, the Festival of the Whetstones and the Festival of the Seed.

In the Dyak mind, spirits and magical virtues are largely associated with stones. Any remarkable rock, especially if isolated in position, is almost sure to be the object of some kind of cultus. Small stones of many kinds are kept as charms, and I have known a common glass marble inwrought with various colours passed off as the "egg of a star," and so greatly valued as being an infallible defence against disease, &c. The whetstones, therefore, although made from a common sandstone rock, are things of some mysterious importance. They sharpen the chopper and the axe which have to clear the jungle and prepare the farm. There is something more than mere matter about them, and they must be blessed. At the *Gawei Batu*, the neighbours are assembled to witness the ceremony and share in the feast, and the whetstones are arranged along the public verandah of the house, and the per-

formers go round and round them, chanting a request to *Pulang Gana* for his presence and aid, and for good luck to the farm. The result is supposed to be that *Pulang Gana* comes up from his subterranean abode to bestow his presence and occult influence, and a pig is then sacrificed to him. In the *Gawei Benih*, the proceeding is similar, but having the seed for its object.

Pulang Gana is, therefore, an important power in Dyak belief, as upon his good-will is supposed to depend, in great measure, the staff of life.

Singalang Burong must now be mentioned. His name probably means the Bird-Chief. Dyaks are great omen observers, and amongst the omens, the notes and flight of certain birds are the most important. These birds are regarded with reverence. On one occasion, when walking through the jungle, I shot one, a beautiful creature, and I asked a Dyak who was with me to carry it. He shrank from touching it with his fingers, and carefully wrapped it in leaves before carrying it. No doubt he regarded my act as somewhat impious. All the birds, to which this cultus is given, are supposed to be personifications and manifestations of the same number of beings in the spirit world, which beings are the sons-in-law of *Singalang Burong* ⁽¹⁾. As spirits they exist in human form, but are as swift in their movements as birds, thus uniting man and bird in one spirit-being. *Singalang Burong*, too, stands at the head of the Dyak pedigree. They trace their descent from him, either as a man who once lived on the earth, or as a spirit. From him they learnt the system of omens, and through the spirit birds, his sons-in-law, he still communicates with his descendants. One of their festivals is called, "Giving the birds to eat," that is, offering them a sacrifice.

But further, *Singalang Burong* may be said to be the Sea Dyak god of war, and the guardian spirit of brave men. He delights in war, and head-taking is his glory. When Dyaks have obtained a head, either by fair means or foul, they make a grand sacrifice

(1) It should be stated that *Singalang Burong* has his counterpart and manifestation in the world, in a fine white and brown hawk, which is called by his name.

and feast in his honour, and invoke his presence. But it is unnecessary to enlarge upon this, for some account of the Mars of Sea Dyak mythology has already appeared in the Straits Asiatic Journal. (See No. 2.)

Now, what with these beings, and with the *Petaras*, it is no wonder that the Dyak, when brought face to face with his own confessions, acknowledges himself in utter confusion on the whole subject of the powers above him; that he owns to worshipping anything which is supposed to have power to help him or hurt him—God or spirit, ghost of man or beast—all are to be revered and propitiated. When inconsistencies in his belief are pointed out, all he says is, that he does not understand it, that he simply believes and practices what his forefathers have handed down to him.

But it is to be observed, as significant, that in sickness, or the near prospect of death, it is not *Singalang Burong*, or *Pulang Gana*, or *Sulampanlai* (which by the way are not commonly called *Petara*); it is not *Kling*, or *Bungai*, *Nuiging*, or any other mythological hero that is thought of as the life-giver, but simply *Petara*, whatever may be the precise idea they attach to the term. The *antu* (spirit) indeed causes the sickness, and wants to kill, and so has to be scared away; but *Petara* is regarded as the saving power. If an invalid is apparently beyond all human skill, it is *Petara* alone who can help him. If he dies, it is *Petara* who has allowed the life to pass away by not coming to the rescue. The Dyak may have groped about in a life-long polytheism, but something like a feeling after the One True Unknown seems to return at the close of the mortal pilgrimage. The only thing which implies the contrary, as far as I know, is, that very occasionally a function in honour of *Singalang Burong* has been held on behalf of a sick person, but it is exceedingly rare.

Although the whole conception of *Petara* is far from an exalted one, yet it is good being. Except as far as causing or allowing human creatures to die may be regarded by them as signs of a malevolent disposition, no evil is attributed to *Petara*. It is a power altogether on the side of justice and right. The ordeal of diving is an appeal to *Petara* to declare for the innocent and overthrow the guilty. *Petara* "cannot be wrong, cannot be un-

"clean." *Petara* approves of industry, of honesty, of purity of speech, of skill in word and work. *Petara Ini Andan* exhorts to "spread a mat for the traveller, to be quick in giving rice to the hungry, not to be slow to give water to the thirsty, to joke with those who have heaviness at heart, and to encourage with talk the slow of speech; not to give the fingers to stealing, nor to allow the heart to be bad." Immorality among the unmarried is supposed to bring a plague of rain upon the earth, as a punishment inflicted by *Petara*. It must be atoned for with sacrifice and fine. In a function which is sometimes held to procure fine weather, the excessive rain is represented as the result of the immorality of two young people. *Petara* is invoked, the offenders are banished from their home, and the bad weather is said to cease. Every district traversed by an adulterer is believed to be accursed of the gods until the proper sacrifice has been offered. Thus in general *Petara* is against man's sin; but over and above moral offences they have invented many sins, which are simply the infringement of *pemate*, or *tabu*—things trifling and superstitious, yet they are supposed to expose the violators to the wrath of the gods, and prevent the bestowal of their gift; and thus the whole subject of morality is degraded and perverted.

The prevailing idea Dyaks commonly entertain of *Petara* is that of the preserver of men. In the song of the head feast, when the messengers, in going up to the skies to fetch *Singalang Burong* down, pass the house of *Petara*, they invite him to the feast, but he replies: "I cannot go down, for mankind would come to grief in my absence. Even when I wink or go to bathe, they cut themselves, or fall down." *Petara* does not leave his habitations, for he takes care of men, and so far as he fails in this, he fails in his duty. So in an invocation said by the *manangs*, when they wave the sacrificial fowl over the sick:—

*Laboh daun buloh,
Tangkap ikan dungan;
Antu kah munoh,
Petara naroh ngembuan.*

*Laboh daun buloh,
Tangkap ikan mplasi;
Antu kah munoh,
Petara ngaku menjadi.*

*Laboh daun buloh,
Tangkap ikan semah;
Antu kah munoh,
Petara ngambu sa-rumah.*

*Laboh daun buloh,
Tangkap ikan juak;
Antu kah munoh,
Petara ngaku anak.*

When the bambu leaf falls,
And is caught by the *dungan* fish;
And the *antu* wants to kill,
Petara puts in safe preservation.

When the bambu leaf falls,
And is caught by the *mplasi* fish,
And the *antu* wants to kill,
Petara will confess a brother.

When the bambu leaf falls,
And is caught by the *semah* fish;
And the *antu* wants to kill,
Petara will claim him as of his household.

When the bambu leaf falls,
And is caught by the *juak* fish;
And the *antu* wants to kill,
Petara will confess a child.

When human life droops as a falling leaf, and the evil spirits, like hungry fish, are ready to swallow it up, then *Petara* comes in and claims the life as his, his child, his brother, and preserves it alive. The ceremony of the *Besant* is an elaboration of this idea, an idea to which, above all others, the Dyaks cling; for the world

is full, they think, of evil spirits ever on the alert to them, but the subject of these *antus* opens up a new field of thought which cannot be entered now.

Petaras are not worshipped in temples, nor through the medium of idols. Their idea of gods corresponds so closely to the idea of men, the one rising so little above the other, that probably they have never felt the necessity of representing *Petara* by any special material form. *Petara* is their own shadow projected into the higher regions. Any conception men form of God must be more or less anthropomorphic, more especially the conception of the savage. He "invests God with bodily attributes. As man's "knowledge changes, his idea of God changes; as he mounts "the scale of existence, his consciousness becomes clearer and "more luminous, and his continual idealization of his better self "is an ever improving reflex of the divine essence." (1)

(1) Origin and Development of Religious Beliefs. S. BARING GULD. Vol. i., p. 187.

(From the "ANNALES DE L'EXTRÊME ORIENT," August, 1879.)

KLOUWANG AND ITS CAVES, WEST COAST OF ATCHIN.

TRAVELLING NOTES OF

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Civil Engineer of Mines.

TRANSLATED BY

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FOR three days we remained in sight of the port of Klouwang ⁽¹⁾ without being able to reach it, our vessel, though one of the finest sailers of the Straits, being unable to overcome the resistance offered by the wind and current, which seem to have combined against us. At last, on the morning of the third day, thanks to a light breeze

(¹) The port of Klouwang is situated on the West coast, thirty miles South of Achin Head. The bay is excellent, being sheltered by an almost round and very lofty island, the shores of which are perpendicular cliffs. Thus the port has two entrances, the wider and safer being the Northern, the narrower lying to the South West; the latter is rendered a little dangerous by a line of breakers, which, however, protects the port from the Southerly winds. The anchorage of Klouwang is very good in all seasons, but the port unfortunately can only contain three or four vessels. The Raja is Toncou LAMPASSÉ, who, during the war with Achin, has supplied the Dutch with information regarding the opinions and plans of the Achinese. The river Klouwang is small, and flows from the S. E. to the N. W.; its entrance is a little to the left of the bay, and is rendered very difficult of passage by rocks at water level. The country produces about 4,000 pikuls of pepper; before the war it produced 10,000 pikuls.

from seawards, we gained the entrance of the port, but truly not without difficulty, for the breeze grew so faint, that our vessel, no longer answering to the helm, entered the port quite obliquely, under the influence of a current, which carried us within a few metres of the breakers near the entrance of the port.

The South entrance, by which we arrived, is splendid; to the right is a volcanic isle, the foot of which is so hollowed by the waves, that from a distance it resembles an enormous mushroom; its shores are very steep and quite denuded of vegetation, a few shrubs appearing on the summit only, but the natives assert that there is no path which will allow of an ascent so far.

In the bank which we are passing, the sea has hollowed out immense caves, where the swallow builds those nests so much sought after by Chinese gourmets.

On the side of the island facing the port, is a charming strand formed of sand and shells, and shaded by shrubs which are over-shadowed by the crowns of countless cocoanut palms.

On our left, the line of breakers, upon which we had so narrowly escaped running, protects the port from the southerly squalls, and only leaves between it and the island of Klouwang a narrow passage 100 metres across. A little further on, a delightful stretch of sand extends to the foot of Mount Timboga (copper) [Malay "Tembaga"], which is somewhat peculiar in shape; it is an immense cone cut obliquely, which seems to have been deposited in the middle of the plain, whence it emerges as from the midst of an ocean of verdure. Its almost perpendicular steeps are clothed with an abundant vegetation, the deep hue of which contrasts forcibly with the brilliant white of the strand. The latter, after performing half the circuit of the port, stretches before us in a smiling valley closely walled in, and here, in the midst of a charming scenery, lies hid the *Kampong* (village) of Klouwang, and the little river bearing the same name.

The North entrance, while larger and more commodious than the Southern, is much less picturesque. It is formed by the island on one side, and on the other by a rather steep mountain lying on the left side of the mouth of the river Klouwang. Hardly had we dropped anchor before we landed on the island to examine carefully the strand which lay before us, and also, as will be readily

understood, to satisfy the longing which filled us to feel under foot something more solid than the deck of our schooner, which we had not left for ten days.

Nothing can be imagined so charming and so picturesque as this strand, which the island shelters completely from the fury and raging of the sea.

At some distance from the shore, which the waters gently caress, is hidden an Achinese dwelling, in a forest of cocoanut, areca, and other palms, which protect it from the solar rays; a little further off is a pepper plantation, admirably cultivated, where birds in the greatest variety sing to their hearts' content. As a background to the picture, rises the rocky mass of the island, presenting a vertical wall, cut, or rather torn about, in the strangest fashion, and covered over with a thick curtain of green, which seems to have been fastened to the points of the rock by some magician. Here Nature seems to have amused herself by gathering together the greatest variety of shrubs, and the most peculiar plants to be found in the tropical world; leaves displaying the greatest diversity of shape and colour combine with the rocky points, which here and there crop up, to form a wondrous mosaic.

A crowd of monkeys of all sizes disport themselves amidst the shrubs, which appear to cling to the rocks only by enchantment, and run along the monkey-ropes which droop in every direction, forming an inextricable net.

The island is composed chiefly of trachyte, crossed by numerous bands of quartz and porphyry. I noticed also in several places masses of selenite and melaphyre covered by overflows of lava.

On my return to the vessel, I was shewn enormous black puddings, about a foot long (0m.30 do long) among the coral rocks which skirt the shore; they are the "holothurion," or sea-leech, called "tripang" by the Malays, who make it the object of an important trade; it is preserved, and highly appreciated by the Chinese.

The next morning we made the tour of the island in a boat. The rock, worn by the sea, in some places projects more than fifteen metres beyond its base. Every moment great birds (called in Malay "kâka") flew out of the corners in the rock with a great noise; they were armed with enormous yellow beaks, which seemed

to greatly embarrass the owners, and gave them such an original expression, that we were never tired of admiring them.

On turning the point of the island, I could not repress an exclamation of surprise. In front of us was a magnificent cave inhabited by millions of swallows, whose piercing cries mingled with the deep murmur of the sea, produced, on their reverberation from the distant depths of the cavern, an awe-inspiring sound, which had no ordinary effect upon the mind.

One could not but feel small in the presence of those grand phenomena of Nature, and silently wonder at the work and its Creator.

The first moments of wonder and admiration passed, we entered the cavern, an immense subterranean canal some fifteen to twenty metres high and ten to twelve metres in width : bambu scaffoldings, extraordinary at once for their lightness and boldness of construction, enable the Atchinese to collect the swallows' nests.

Ten metres from the entrance, a fresh surprise awaited us. A submarine communication between the cavern and the sea allows a gleam of light to penetrate at the bottom of the water, and this, in its passage, illuminates the fish whose scales flash countless colours scattering everywhere multicoloured reflections with fairy-like effect.

The subterranean canal soon turns to the right, penetrating into the heart of the island, whither it continues its course for a great distance, for the murmur of the sea reverberates endlessly ; but the darkness prevented our going any farther.

Between this point, E.S.E., and the port is another avenue, the two entrances to which are above the sea ; they are at an elevation, the one of twenty metres, the other of about thirty-five metres ; for some time we could not find a point where it was possible to land ; everywhere the sea-worn rock was vortical when it did not overhang us ; at last, two-hundred metres farther on, we found a spot where the rock had fallen down and where we could land ; we then contrived, sometimes by leaping from rock to rock, sometimes by making use of the unevennesses on the surface of the wall of rock, to reach the upper entrance, where a marvellous sight repaid us for our trouble. A vast cavern lay open before us. At our feet and

at a depth of about thirty metres was a black unfathomable gulf, whence arose the deep murmur of the waters. About fifteen metres below, to the right, was the other entrance, resembling an immense window opening upon the sea. Before us the cavern seemed to extend indefinitely into the shade, and the green and blue tints of the rock growing gradually darker and darker formed a strange contrast to the magnificent pearl-grey of the stalactites which hung on our right; above us the rock was of a dead white, whilst the floor of the cavern, which seemed to be the ancient bed of a torrent, presented a series of striking and sharply-marked tiers of colour, resembling a painter's palette. The most brilliant decorations of our pantomimes could give but a feeble idea of the magnificent tableau we had before us.

Leaping from rock to rock, we descended to the floor of the grotto, which is formed of pebbles and water-brought soil ⁽¹⁾; this floor rises with a gentle slope towards the interior; after one hundred paces all became so dark around us, that we were obliged to light torches; on every side crossed each other in slight millions of swallows, which deafened us with their piercing cries, while our torchlight lent to the gigantic bambu scaffoldings the most picturesque effect; every time they flared up the cavern was illuminated to great distances, and we suddenly perceived an inextricable web of bambus, white rocks and streamlets, which appeared to multiply as we advanced, when suddenly all vanished in darkness; the effect was most fantastic.

The soil of the cavern, in which we sank up to our knees, is light and dry, being formed of the excrement of the swallows; insects breed there in great numbers and the glare of the torches reflected on their armour produced a splendid play of light. The soil seemed made of precious stones flashing across at each other at our feet.

(1) The fact can only be explained by supposing that the floor of the cavern was originally below the level of the sea. It is one of many observations I have recorded, which shew indisputably the ascending movement of Malaya; this movement is being still continued in our time, as observations made at other points of the East and West coasts of Sumatra have shewn me.

As we advanced, the subterranean passages multiplied and grew narrower; it was a labyrinth out of which we thought at one moment we should be unable to find our way, for our torches were beginning to be used up, and we were not very sure as to the direction we ought to take. We now heard to the left a dull sound which indicated another communication with the sea, perhaps with the cavern we first visited. Then a little further to the right we descried a feeble glimmer of light at the vault of the cavern, but it was impossible to reach this opening, owing to its great height.

The cavern probably extends under a great portion of the island, but unfortunately our torches were burnt out, and we were obliged, to our great regret, to return to the ship without having explored the whole of it.

In the evening, the breeze became favourable, and at eleven o'clock on a splendid night, such as can only be seen in Malaya, we weighed anchor, carrying with us one of the most pleasing souvenirs of our whole voyage.

MISCELLANEOUS NOTES.

VARIETIES OF "GĚTAH" AND "RÔTAN."

Meagre though it is, I insert the following list of native names of the different varieties of "gĕtah" and "rôtan," in the hope that it may be of some slight use to those who are interested in these products of the jungle.

D. F. A. H.

Gĕtah taban.

„ tōkon.

„ gĕgrit.

„ gĕgrit pūtih. (Gives an itch.)

„ jĕlōtong. (White and red)

„ anjāyus or mĕnjāyus.

„ pūdu

„ sĕlambau.

„ rĕlang.

„ ūjil.

„ bĕringin.

„ pĕrcha. (i.e., ragged.)

„ kĕtĭan. (Has a sweet, aromatic-flavoured, small, white, fleshy flower, which is very pleasant to the taste, and is always eaten by the natives when met with.)

„ rāchun. (i.e., poison.)

„ jĕlā.

„ jĭtan. (Gĕtah used as ointment for pūru, or ulcerated sores.)

„ chāloi.

„ akar sāsū putrĭ. (Root covered with humps.)

Gĕtah sĕrâpat.

„ sundek.

„ tĕrap.

Rôtan tunggal.

„ bātu.

„ krei. (or kral in Pāhang.)

„ lĕbun.

„ tĕwar or gĕtah.

„ bâkau.

„ lâyar.

„ prĕt āyan.

„ mânau.

„ ohinchin.

„ hûdang.

„ hûdang tikus.

„ pĕlĕdas.

„ lĭlin.

„ sĕbut.

„ dahan.

„ sĕngkĕlah.

„ bûah.

„ sĕmambu.

„ dūdok.

„ chĭchir.

„ sĕgar.

„ sĕgei.

„ lĭchin.

„ kĭkir.

„ sĕga.

„ sĕga bĕdak. (Grows near water.)

„ jĕrnang.

„ sĕnĕnyer or bras.

„ dĭni. (Grows near the sea.)

„ pĕrdas.

THE "IPOH" TREE—PÊRAK.

The Resident of Pêrak having collected some of the juice of this tree, it was sent to Kew, together with some of the leaves, for identification.

Sir JOSEPH HOOKER was good enough to submit it to Professor OLIVER, who wrote as follows:—

"The 'Ipoh' from Pêrak is either the *Upas (antiaris toxicaria)* or a close ally. Our specimens hardly differ, except in being more glabrous.

"GRIFFITH labels a specimen 'The small-leaved *Epo* or Jackoon poison.'

"He adds: 'Arsenic is mixed with the milk, which is said to be otherwise inert.'

"The Pêrak specimens are without flower or fruit."

Professor RINGER, also, reports that the specimen sent "is absolutely destitute of poisonous properties of any kind. It has in fact no effect physiologically at all."

COMPARATIVE VOCABULARY.

<i>English.</i>	<i>Fijian. (1)</i>	<i>New Zealand. (2)</i>
Man	Taŋgani (3)	Tangata (4)
Woman	Alewa	Wahine (5)
Husband	Vei watini (6)	Tona Tane (7)
Wife	Vei ndavoleni (8)	Tona Wahine (9)
Father	Tama	Matua Tane (10)
Mother	Tina	Matua Wahine (10)
Child	Luve	Tamaite (11)
Belly	Keti	Kupu
Blood	Ndra	Toto
Body	Yaŋgo	.....
Bone	Sui	Iwi

(1) Collected by the Hon'ble J. B. THURSTON. See Note at p. 168.

(2) Supplied by His Excellency Sir FRED. A. WELD, K.C.M.G. See Note at p. 169.

(3) A Chief=Turaŋga.

(4) Tane=Male. Toa=a Man, a Brave. Hawaiian: Kanaka. Southern Tribes, New Zealand: Kangaka.

(5) Aroha=Love, N. Z. Vahim, Tahitian.

(6) =They who lie together.

(7) =Her man.

(8) =His woman.

(9) =Male parent.

(10) =Female parent.

(11) Girl=Tamahine.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Ear	Ndaliga	Teringa
Eye	Mata	Kanoć
Face	Mata	Moko
Finger	Ndusi	.....
Foot	Yava	.....
Hair	(¹)	Huru Huru (²)
Hand	Liŋga	Ringa Ringa
Head	Ulu	Uboko
Mouth	N̄gusu	.....
Nail	N̄dua	.....
Nose	Uthu	Ihu (³)
Skin	Kuli	Kirri
Tongue	Yame	.....
Tooth	Mbati	.....
Bird	Manu	Manu (⁴)
Egg	Yaloka	Ua (⁵)
Feather	Lawe	.....
Fish	Ika	Ika
Fowl	Toa	(⁶)

(¹) Differs whether human or animal, and of the head or body.

(²) Beard=Pahau. Tahitian: Rau Huru. Ram=leaf, N. Z.

(³) =Point.

(⁴) Hawaiian: Manu.

(⁵) Ua also means female.

(⁶) Tahitian: Moa, which also means the Dinornis bird, now extinct.

Toa, N. Z., means a brave strong man.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Alligator	.....	.....
Ant	Kaŋdi	.....
Deer	.....	.....
Dog	Koli	Kuri
Elephant	.....	.....
Mosquito	Namu	Namu
Pig	Boach	Poaka ⁽¹⁾
Rat	Kalavo	Kiore
Rhinoceros	.....	.....
Snake	Ŋgata	⁽²⁾
Flower	Se	.....
Fruit	Vua	.....
Leaf	Drau	Rau
Root	Waka	.....
Seed	Se	.....
Tree	Kau	Rakau
Wood	Kau ⁽³⁾	Kakau ⁽⁴⁾
Banana	Vuŋdi	.....
Cocoanut	Niu	.....

⁽¹⁾ From English "Porker"? Pigs not indigenous, but left by Captain Cook.

⁽²⁾ Unknown, but lizard, reptile=Ngarara.

⁽³⁾ Firewood=Mbuka.

⁽⁴⁾ Firewood=Wahic.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Rice	.....	.....
Honey	.....	.....
Oil	Waiwai	Hinau ⁽¹⁾
Salt	Masima	.....
Wax	.....	.....
Gold, &c.	(²)	.....
Arrow	Ngasau (³)	.....
Boat	Waūga, Ndrua, Velovelo	Waka (⁴)
Mat	Imbi	.....
Paddle	Voteh	Ohé
Spear	Motu	Tiaha (⁵)
Blow-pipe	.....	.....
Waist-cloth	Masi, Malo, Sulu	.....
Jungle	.....	.....
Mountain	Ndelā ni vanua (⁶)	Maunga (⁷)
River	Uthiwai, Vurewai (⁸)	Wai Maori (⁹)

(¹) Hinau also means fat.

(²) No Native names for Metals.

(³) = A reed. Vana = to shoot.

(⁴) = A canoe.

(⁵) Ornamented spear or quarter staff.

(⁶) = Top of the land. Buke = a hill.

(⁷) Hill = Buke or Puke.

(⁸) Wai = water.

(⁹) = Maori or native, indigenous, water.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Sea	Tathi	Moana or Wai Tal ⁽¹⁾
Earth	Vanua ⁽²⁾	Whenua ⁽³⁾
Sky	Laŋgi	Rangi
Sun	Siŋga	Ra
Moon	Vula	Marama
Star	Kalokalo	Whetu
Thunder	Kurukuru	.....
Lightning	Livaliva	.....
Wind	Thaŋgi	Hau
Rain	Utha	Uha
Fire	Buka	Ahi
Water	Wai	Wai ⁽⁴⁾
Day	Siŋga	Ra
Night	Mboŋgi	Po ⁽⁵⁾
To-day	Eŋdaiŋdai	Tenei Ra ⁽⁶⁾
To-morrow	Mataka, Saboŋgi boŋgi	Apopo
Yesterday	Enanoa	Inenai
Alive	Bula	.....

(¹)=Tide water. Hawaiian: Moana.

(²) Soil=Ngeli.

(³)=Land, earth.

(⁴) It was formerly "Vai" in Tahiti, and still "Wai" in Hawaiian.

(⁵)=Dark.

(⁶)=This day.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Dead	Mate	Mate Mate ⁽¹⁾
Cold	Liliwa	Makaridi, Makari
Hot	Katakata	Wera Wera ⁽²⁾
Large	Levu	Nui ⁽³⁾
Small	Lailai	Iti
Black	Loaloa	Munga Monga ⁽⁴⁾
White	Vula	.....
Come	Mai	Harre mai ⁽⁵⁾
Go	Lako	Harre ⁽⁶⁾
Eat	Kana	Kai
Drink	Ngunu	.....
Sleep	Mothe	Moó
One	Dua	Tahi ⁽⁷⁾
Two	Rua	Dua or Rua ⁽⁸⁾
Three	Tolu	Etern
Four	Va	Ewa

(¹) Mate also means sick.

(²) Wera also means red.

(³) Roa=long, large, strong.

(⁴) "Loa" or "Roa"=big, long, strong, high, in New Zealand and Hawaiian.

(⁵)=Proceed *hither*.

(⁶) Harre atu=Go away, be off with you.

(⁷) The prefix "Ko" is used in counting, thus: "Ko tahi" "Ko rua" &c.

(⁸) The latter is the more usual.

<i>English.</i>	<i>Fijian.</i>	<i>New Zealand.</i>
Five	Lima	Rima or Lima
Six	Ono	Ono
Seven	Vetu	Whitu
Eight	Walu	Waru
Nine	Thiwa	Iwa
Ten	Sagavulu	Tahi te kau ⁽¹⁾
Twenty	Rua sagavulu	Erua te kau ⁽²⁾
Thirty	Tolo sagavulu	Eteru te kau ⁽³⁾
One hundred	Drau	Tahi te pou
One thousand	Undolu	.....
Ten thousand	Omba	.....

(¹) = One Tally.

(²) = Two Tallies.

(³) = Three Tallies.

NOTE BY MR. THURSTON.

The Fijians are certainly of the same stock as the Black Tribes of the Peninsula, although frequent crossing with people of the Malayan type—especially Tongans—has produced a considerable change in their physical appearance and in their language. This admixture is, as might be expected, most apparent upon the coasts. In the mountain parts of Vite Levu (an island about the size of Jamaica) the natives are, judging from description (Journal No. 5, p. 155) like the Semangs of Ijoh. Like those people, the Fijians wear small tufts or corkscrews of hair, of which they are very proud, but instead of “jamûe” they call these tufts “taumûi.”

Many of the words in the Vocabulary are familiar to me. The majority, if not all of them, appear to me, however, of Malayan rather than Papuan root, and it is the dialects, grammatical structure of language, and customs of the black race, by whatever name called, rather than Malayan, that I am in want of.

It often occurred to me that my old friend the Australian "Bunyip"^o was nothing more than a black fellow's exaggerated description of a crocodile, and now that I see that with a slight change its name runs from "Buaya" in Malay to "Buyah" in Semang, I am inclined to the idea more than ever.

NOTE BY SIR F. A. WELD.

^o The Crocodile or "Alligator" abounds in some rivers of Northern Australia; tribes wandering South and holding no further communication with the North may have retained the memory of their former enemy.

4-2
3-1

"A book that is shut is but a block"

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